NATUR CYMRU

The Nature of Wales

Number/Rhif 27 • Summer/Haf 2008

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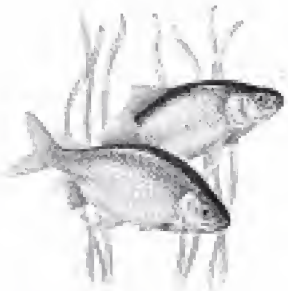
- Leaf litter life
- National Botanic Garden meadows
- Y Beili Brwydfrydig
- Restoring open water in Pembrokeshire
- Books, News, Comment...



NATUR CYMRU
The Nature of Wales

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Natur Cymru is published four times per year, in March, June, September and December. Articles are published in the language in which they are submitted. They are followed by summaries in the other language, and some regular columns appear in both languages. If you would like to receive a translation of any article, please contact the editor.

Natur Cymru is intended to promote the exchange of information about biodiversity and encourage debate. If you have information, ideas for articles or artwork which you think might be of interest to readers, please contact the Editor.

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Tanysgrifiadau / Subscriptions:
Unigolyn / Individual:
Sieciau /Cheques: £14.00
Debyd Uniongyrchol / Direct Debit: £13.00
Sefydliad / Organisation: £25.00

Sieciau yn daladwy i / Cheques payable to: Natur Cymru Ltd.

Cwmni Cyfyngedig trwy Warant yw Natur Cymru Cyfyngedig, ac nid yw'n gwmni sy'n gwneud elw. Mae wedi ei gofrestru yng Nghymru a Lloegr, rhif 5636217. Nid barn Natur Cymru Cyfyngedig neu'r Golygyddion a leisir yn y cylchgrawn hwn o angenrheidrwydd.

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Mae *Natur Cymru* wedi'i argraffu ar bapur di-glorin a ddaw o goedwigoedd cynaliadwy sy'n cael eu rheoli.

Natur Cymru is printed on chlorine-free paper sourced from managed and sustainable forests.

Llun y clawr / Front cover:
Peter Winstanley
The Botanist at Caeau Tan y Bwlch
The full painting will appear on the cover of the forthcoming book *Grasslands of Wales*. Its main author, the late Dr David Stevens, is the botanist in the picture.

ISSN 1742-3740

Argraffwyd gan/Printed by: LS Printworks, Amlwch • Dylunio gan/Design by: Mel Parry Design, melparry1@tiscali.co.uk

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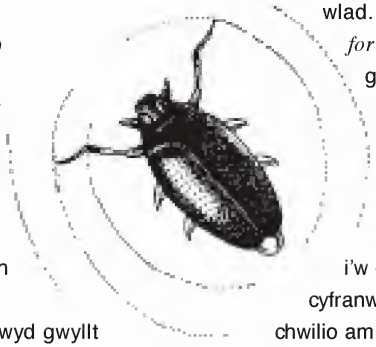
NATUR CYMRU GOLYGYDDOL

Rydw i am ddechrau trwy grybwyll penbleth ddyrys. Rydw i'n eistedd wrth fy nesg o flaen y cyfrifiadur ar ddiwrnod bendigedig o haf. Fe ddylwn i fod allan yn yr awyr agored yn mwynhau byd natur ac yn chwilio am ysbrydoliaeth ar gyfer y golofn hon. Ond os gwna' i droi cefn ar fy nesg, wnaiff yr erthygl olygyddol hon byth bythoedd weld golau dydd.

Yn aml, yr hyn sy'n hanfodol i'r gwaith o warchod bioamrywiaeth yw nodi'r nodweddion arbennig a cheisio eu cadw yn y lle y dylent fod. Y broblem efo hyn yw'r ffaith nad yw natur byth yn aros yn ei hunfan. Rydw i wedi gwylio cynefinoedd y bûm yn eu rheoli yn newid yn gyflymach o lawer na'r disgwyl, a bellach rydw i wedi sylweddoli bod dod o hyd i gyfleoedd newydd yr un mor bwysig i fywyd gwyllt ag ydyw i bobl. Fel yn ein bywydau ni, gall newid arwain at adfywio ac adnewyddu. Y ffordd orau o warchod planhigyn prin yw ei roi mewn lle sy'n mynd i gynnig cyfleoedd lu iddo ffynnu. Rhywbeth i'w wneud pan fetho popeth arall yw 'garddio' – sef cael gwared â'r elfen 'wyllt' o fywyd gwyllt.



Ceir tair erthygl sy'n trafod ffyrdd gwahanol o roi rhyddid i natur wneud y gwaith drosti ei hun. Yn Bosherton, mae'r Cyngor Cefn Gwlad a'r Ymddiriedolaeth Genedlaethol wedi cymryd yr awenau, wedi wynebu sialensiau ymarferol, wedi delio efo gwahanol ofynion statudol, wedi cynnwys y gymuned, ac wedi creu ardal ddyfrol fawr ar gyfer planhigion ac anifeiliaid. I Ymddiriedolaeth Natur Gwent, y cam cyntaf yn unig mewn taith a fydd yn mynd â ni 'yn ôl i'r dyfodol' oedd prynu hen fferm laeth 104 acer. Yn awr, gall natur adennill y tir a oedd gynt yn rhan o dirwedd ganoloesol Tir Comin Wyeswood, gan ei droi'n goetir efo llennyrch blodeuog. Fe fydd hyn oll yn cynnig lle i fywyd gwyllt ac yn rhoi pleser mawr i bobl, a bydd yn dangos hefyd sut mae rheoli tir yn gynaliadwy mewn dyfodol lle bydd olew yn brin.

Mae'r dolydd o amgylch yr Ardd Fotaneg Genedlaethol yn prysur ddatblygu'n enghraifft o sut y dylid meithrin dolydd blodau gwyllt. Dydy hon ddim yn dasg hawdd, ond yn sicr mae'n un werth chweil. Os ydym am weld dolydd blodeuog yng nghefn gwlad Cymru unwaith eto, rhaid ailadrodd gwaith gwych yr Ardd Fotaneg drwy'r holl wlad. Dyma yw uchelgais *A Manifesto for the Wild Meadows of Wales*, a gyhoeddwyd yn ddiweddar – cyhoeddiad a gafodd anogaeth a chefnogaeth ar hyd ac ar led (darllenwch dudalen 44).

Wrth gwrs, mae yna lawer mwy i'w ddarllen yn y rhifyn hwn. Mae'r cyfranwyr wedi bod hwnt ac yma yn chwilio am famaliaid ac yn archwilio gweddillion dail, ac maen nhw'n rhannu efo ni eu brwydr i warchod genynnau a phoblogaethau merlod, eu profiadau fel naturiaethwyr ar flaen y gad, a'u hymdrechion i elwa i'r eithaf ar amgylchedd y Cymoedd.

A ddylech chi dreulio amser yn darllen yr erthyglau hyn, pan allech chi fod allan yn archwilio byd natur drosoch eich hun? Fy ateb i'r benbleth hon oedd cymryd hoe fach, cerdded trwy ddôl laith a oedd yn binc gan flodau melog y cŵn, a gwylio gwesyn cynta'r flwyddyn – gwesyn benywaidd neu anaeddfed a oedd wedi clwydo fel gwenynen feirch enfawr ar ddraenen wen. Roedd hynny'n ddigon i'm sbarduno i ailafael yn fy ngwaith o flaen y cyfrifiadur. Fel arfer, dod o hyd i gydbwysedd yw'r ateb – rhwng darllen neu ysgrifennu am fyd natur, a'i weld a'i glywed eich hun; rhwng gweithredu ar y naill law, a myfyrio ar y llall; ac, i'n rhywogaethau, rhwng addasu'r amgylchedd fel ei fod yn gweddu i ni, a sicrhau lle i'r creaduriaid sydd wedi esblygu ar y cyd â ni.

James Robertson

NATUR CYMRU EDITORIAL

Well start with a conundrum or two. I'm sitting at my desk in front of the screen on a lovely summer's day. I should be outside, enjoying nature and gaining inspiration for this column. But if I abandon my desk, this editorial will not be written in time.

Biodiversity conservation often boils down to identifying what is special and trying to maintain it *in situ*. The dilemma here is that nature never stays still. I have watched habitats which I manage change at a speed I would never have dreamed possible, and have come to realise that finding new opportunities is as fundamental to wildlife as it is to humans. As in our own lives, change is renewal. The best way of conserving a rare plant is to provide it with an environment rich in opportunities. 'Gardening' it is a last resort, which inadvertently takes the wild out of wildlife.

Three articles explore different ways of freeing up nature to do the work itself. At Bosherston, CCW and the National Trust have bitten the bullet, faced practical challenges, met assorted statutory requirements, brought the community along with them, and opened up a large watery environment for plants and animals to rediscover. For Gwent Wildlife Trust, the purchase of 104 acres of former dairy farm is just the first step in a journey 'back to the future', when wildlife will reclaim land which was once part of the medieval landscape of Wyeswood Common, and turn it into woodland edge and flowery glades. Not only will this give room for wildlife and pleasure for people; it will also demonstrate sustainable land management in an oil-scarce future.

The meadows around the National Botanic Garden are on their way to becoming an object lesson in how to provide wildflower meadows with the opportunities they need. The task is not easy, but it is hugely worthwhile. If flower-rich meadows are to become once again part of our shared experience of the Welsh environment, this needs to be replicated across the country. This is the ambition of *A Manifesto for the Wild Meadows of Wales*, published recently with widespread support and encouragement (see page 44).

There is much more to read in this issue. Contributors have been out there, detecting mammals and investigating the inhabitants of leaf litter; they share the struggle to conserve the genes and populations of ponies, their experiences as wildlife enthusiasts at the front line, and efforts to get more out of the Valleys environment for people, and vice versa.

Should you spend time reading these articles, when you could be out exploring the natural world yourself? My answer to this dilemma was to take a break, walk through a damp meadow pink with lousewort, and watch my first dragonfly of the year, a female (or immature) broad-bodied chaser, perch like a giant wasp in a hawthorn bush. That was enough to get me to resume my position like a supplicant before my computer screen. Striking a balance is generally the answer; between reading or writing about nature, and experiencing it; between action and reflection; and, for our species, between modifying the environment to suit ourselves and providing space for what I think of as our co-evolutionaries.

James Robertson

Mammal detective

An otter's lying up area

Not all wildlife is approachable, sitting still (plants) or giving away its presence by singing (birds). Mammals are particularly difficult, and you have to learn a language of signs and smells and... scats. ***HUW JENKINS****, having volunteered to learn the art of mammal-detecting, passes on some tips to those who might like to tread the same path.*

Watch a David Attenborough or a Iolo Williams programme and wildlife is standing up to be counted. Walk the woods and mountains of north Wales and it looks thin on the ground. Birds might show off in front of you but mammals are altogether more secretive. Many are nocturnal and the chances of seeing them are remote. However, their signs are there if you know how to read them.

Driving home alongside the river one night I came across my first ever otter, playing in an impromptu stream brought on by heavy rains. It splashed around for half a minute just a few feet in front of my headlights (dipped, of course, out of courtesy) until it disappeared into the dark. I told a friend, who said I should report it to my local biodiversity officer, so I did. This obviously showed a latent wildlife interest to be encouraged and, not long after, I received an invite to a mammal detective workshop organised by *Mamaliaid Eryri*, the Snowdonia Mammal Group.

Whose nuts?

Otter spraint

Kate Williamson

The Group has embarked on an ambitious project to record the distribution of mammals in over 2,000 one kilometre squares within the National Park. That's a lot of ground to cover so volunteers are being recruited and trained to assist. To date, more than 3,600 mammal sightings have been recorded, with a sheep in every square apart from the middle of Llyn Trawsfynydd. The results are due to be published as the 'Mammal Atlas' in 2010.

How did you know it was an otter and not a mink?

We met in a warden's hut and began with a pointed question *"How did you know it was an otter and not a mink?"* I muttered something about 'Ring of Bright Water' but these days I can be much more specific. Weighing up to ten kilos and five times heavier than the dark-skinned mink, otters are staging a comeback on every river in Wales on the back of significantly improved water quality.

So far I've not seen another otter but I have seen their 'spraints', piles of black tarry poo with fish bones and scales or bits of frog. They're not too hard to find as they are unashamedly deposited in prominent positions, on boulders or roots of trees, in places defining territory. If nothing prominent is available, the ever resourceful otter will build a sandcastle and spraint on that!

My induction took on a new dimension as the speaker unzipped a spraint out of a plastic bag and passed it round for us to comment on the bouquet. Quite pleasant really, a bit fishy perhaps, but the classic description is like the smell of jasmine tea. The next bag contained a mink scat (another poo word) and this did the rounds much quicker - twisted and foul-smelling from a diet which is over ninety per cent mammal.

The Lord Lucan of Welsh mammals?

Moving swiftly on to the pine marten, which has declined from being the second most common carnivore, and is now confined to strongholds in Scotland and Ireland and isolated communities elsewhere. We think we've got them in Snowdonia but can't prove it. There have been lots of 'good sightings', as defined on a checklist prepared by the Vincent Wildlife Trust, but so far no concrete proof. Some visitors recently described a skinny badger racing up a tree like a squirrel - could that have been the Lord Lucan of Welsh mammals?

Our closest confirmed community of pine martens is near Aberystwyth, recently proven through DNA analysis of scats. The archetypal scat is a hair-pin or heart-shaped twisted coil about the thickness of a finger, but depending on diet and the amount of weathering, they can come in many shapes and sizes. Analysis of the 36 scats collected on that field trip also revealed the presence of a miniature schnauser - amazing how specific science can be.

Kate Williamson

Water vole burrows

Studying scats

Left-handed squirrels

Squirrels are found in many squares. Apart from seeing them or their dreys, a good clue is the discarded pine cone which has been gnawed away to extract the nutritious seeds. The real professionals can tell you whether the squirrel was left- or right-handed - apparently 15% are left-handed, the same proportion as humans.

The slide show and presentation continued, covering most of the mammals we would be searching for but there's only so much to be learnt in a classroom. The best education is to be had seeking evidence in the real world.

Equipped with map and notepad, our leader led us into the first survey square and asked us to find the aptly named short-tailed vole. There are masses of these, often referred to as 'Mountain Mars Bars', being the readily available snack for all sorts of predators. Crouching down and parting the long grass, we uncovered a maze of runs or tunnels which eventually led to a vole latrine with tiny pellets of poo, about the size and shape of a grain of rice. A bit further on we found a larder with freshly harvested short stalks of reed.

Bank voles are much the same to look at, with a slightly longer tail, and the usual give-away sign of their presence is the nibbled nut. Not any old nibble but a clean chiselled hole without the scratches which a wood mouse leaves around the sides. Very different to the can-opener gouging of a dormouse nibbled nut and nothing like the macho, prising apart by a squirrel.

Moles are easy enough to detect, throwing up mounds of topsoil as they endeavour to maintain their network of worm trap tunnels. Every now and again there is an exceptionally large mound, called a fortress, which is where the nest will be and also the worm larder - when catching a worm, the mole bites it in the neck with a paralysing poison, and takes it to the larder where it stays fresh and immobile until ready to be eaten. So much more sustainable than a deep freeze.

As for the badgers or *'mochyn daear'* (earth pigs), they are recklessly indiscrete, bearing in mind the proposed culls. Massive spoil heaps indicate the degree of excavation and the rotated D-shape of the hole reflects its powerful broad frame. As for being house proud, the bedding is sometimes dragged outside to air in the sun. The distinctive hairs, once commonly used for shaving brushes, can often be found stuck on the spikes of barbed wire, indicating regular routes, leading amongst other things to latrines with vast dollops of beetle-filled badger poo.

Wild goats are easy for newcomers to spot and, with about 2000 in Snowdonia, there are plenty of them. The typical advice is that if you think you've seen

half a sheep, then it's probably the white half of a goat. Enthusiasts will go on to sex them by the shape of the horn (cylindrical for female, tear-shaped cross-section for male) and age them according to the horn growth rings – one for each year.

Our leader looks at his GPS and announces we are now in the next square. Counters to zero and once more the hunt is on for short tailed voles.

Within a square there are obvious, likely spots to explore such as streams for otters and paths for foxes - they're not going to waste energy crashing through the undergrowth when a ready made route exists. Stone walls can be fruitful too, with their multiple uses as mammal motorways, safe havens, hunting lookouts and territory boundaries. Weasel (small) and stoat (large) scats are often found amongst or on the walls. The base of a hazel tree is another great place to investigate to see who's been eating the nuts. Boggy parts with clumps of reeds can be likely water vole sites. These look a bit like a scaled-up version of the bank vole, similar in size to a rat but with a rounded face and furry tail.

Look what the cat dragged in

The drugs squad use sniffer dogs but mammal detectives use cats. In a project titled *'Look what the cat dragged in'*, cat owners are being recruited to report on the victims their vicious pets bring home. This will help to identify the presence of the smaller and more elusive mammals, such as shrews and dormice. The results will be compared with an analysis of owl pellets from the same area.

With just two more years of recording to go, there are plenty of gaps in the atlas to be filled. If you would like to join in, you will be most welcome. Field trips are organised every month and led by experienced guides who will provide basic training in what to look for and how to identify the various species. One of the guides is Rob Strachan, author of *Mammal Detective* - a superb book that is an enjoyable read from cover to cover and an invaluable reference thereafter.

To join in the fun of finding mammals and contributing to the Snowdonia mammal atlas, send an email to:
Kate.Williamson@eryrinpa.gov.uk

HUW JENKINS is a freelance writer and community reporter for BBC Radio Wales as well as being a member of the Snowdonia Mammal Group.

Frank Greenaway

Bele
Pine marten

Dysgu bod yn Dditectif

Gweld dyfrgi am y tro cyntaf sboerdun-odd Huw Jenkins i fod yn ddditectif mamaliaid. Bellach mae'n helpu grŵp Mamaliaid Eryri i gasglu cofnodion ar gyfer Atlas Mamaliaid 2010 ac yn cael ei hyfforddi i adnabod olion yn y maes.

Mae adnabod baw yn sgil allweddol - o'r gronynnau siâp reis sy'n cael eu cynhyrchu gan lygod pengrwn y gwair i'r pentyrrau du ag oglau pysgod sy'n cael eu gadael gan ddyfrgwn a'r uwd tywyll llawn chwilod a adewir gan foch daear mewn pantiau pridd. Mae olion bwydo hefyd yn bwysig. Er enghraifft, bydd gwiwer yn hollti cneuen yn llwyr tra bydd llygoden bengron goch yn creu twll bach glân a llygoden y coed yn creu twll blêr â chrafiadau o'i gwmpas.

Gall cartrefi rhai mamaliaid fod yn ddigon amlwg - fel nythod gwiwerod, twmpathau gwahaddod a thyllau moch daear ond rhaid chwilio'n galetach weithiau am gartrefi mamaliaid bychain yng nghanol llystyfiant.

Rhaid gwybod lle i chwilio - mae waliau ac afonydd ymhlith y lleoedd gorau ond gall llwyni cyll a chorsydd fod yn fannau da hefyd. A gall perchnogion cathod gadw llygad ar lawr y gegin i weld pa famaliaid bach gaiff eu cario 'nôl wedi noson o hela! Mae cyfle i bawb, yn wir, fod yn rhan o'r gwaith cofnodi hwn!

Gemma Bodé

A once and future common

Large expanses of rye grass are functional but dull. The chance to take a dairy farm back to its Wyeswood Common roots was so exciting that one Wildlife Trust had to pursue it. ***JULIAN BRANSCOMBE*** *tells the story of a major acquisition; imaginations have been fired and energies released. Wyeswood still has a long way to go back to the future, but it will become a grazed mosaic of woodland edge and flowery glade once more.*

Wyeswood Common

For Gwent Wildlife Trust, 2008 will always be the year that we started on the re-creation of Wyeswood Common. Intensive dairy pasture, adjoining GWT's Pentwyn Farm reserve at Penallt, just south of Monmouth, is now safely on the way to become a dazzling wildlife site. It will let visitors enjoy a striking new wilderness, complemented by the regimented medieaval landscape of Pentwyn Farm next door. Not only that, we believe Wyeswood Common holds the keys to securing a future for lowland biodiversity, as we will use it to spearhead a landscape-scale habitat creation campaign in south-east Wales.

When I joined GWT in 2001, I was taken to Pentwyn Farm by my predecessor, Jon Winder. He pointed at a 20 acre field, glowing green with a uniform sweep of planted rye-grass, across the drystone wall from our cluster of pristine hay meadows. "Wouldn't it be good to transform that," he said. Of course I agreed, but with little hope or expectation that this would ever come to pass.

GWT

Pentwyn flowers

Suddenly, in summer 2007, the land was on the market. Not just that field, but a total of 104 acres of lush dairy pasture. A wave of excitment rippled around our office, but we had no spare cash, and the scale of the task was terrifying. Despite this, our staff, particularly Lauri MacLean and Gemma Bodé, encouraged me, and then a local trustee, Dr Steph Tyler, took up the browbeating. We had a walk on the land, and took a moment to dream. From that came a burning determination which dominated our next six months.

Our vision crystallised when GWT's Council met in September. Trustees challenged me on the risks and opportunities in a very stimulating and charged meeting. The room lit up when our President, Dr George Peterken, questioned whether this was an opportunity to combine restoration ecology with Franz Vera's theory of an open wildwood with heavily-grazed glades. And the full Wyeswood Common vision - the creation of a mosaic of species-rich grassland and woodland, to be managed in perpetuity by the naturalistic processes of grazing by free-ranging stock - was born.

Now to raise funds

The vendors accepted our offer for the land. We gathered firm support from the Woodland Trust, and the Wildlife Trusts across Wales and Gloucestershire. We got our first grant - an offer of £20,000 from the Wye Valley AONB Sustainable Development Fund.

By this point, GWT staff and volunteers were redeployed into developing our vision, costing it (coming out at the pricey and princely sum of £613,000 for acquisition, habitat creation and initial management), and getting the proposal hawked around funding bodies. A trustee, Mary Field, helped to hold the whole project together, writing over 40 grant applications.

Art Matters

Artist's impression of Wyeswood

Meanwhile, a team of us were beavering away at a very comprehensive proposal for the Tubney Charitable Trust. This funder – our biggest prospect for cash – is renowned for its scrutiny. Our bid ended up with 33 plans and appendices[1] including an analysis of options for the vision, a sequential habitat creation plan, detailed BAP species and habitat objectives, archaeological assessment, climate change scenario analysis, a carbon budget and a synthesis of relevant habitat-restoration experience from the UK. We even produced a five year management plan, four months before we bought the land - certainly an indication of intent for an organisation which must admit, albeit reluctantly, to be 'a bit behind' in our management planning for our existing estate.

We felt the ecological context for the aquisition was compelling. The dairy farm was surrounded by a grassland SSSI, woodland and lesser horseshoe bat roost SACs, and a vital scatter of local Wildlife Sites. More important still was the appendix outlining our ambitions as to how the acquisition could act as a catalyst for further habitat creation across lowland Monmouthshire, a campaign which we are now taking forward with the Woodland Trust.

History on our side

By this time the slogan 'Back to the Future' had been coined. We had the historical precedent. And we were sure our vision was central to giving lowland wildlife the chance to survive in a countryside facing intensifying uses and the spectre of climate change. The historical

Gaynor Ainscough

Common spotted orchid

situation was fascinatingly expressed by George Peterken, who produced a paper on *Wyeswood in History*. Our objective of an extensively grazed woodland / grassland mosaic does not just date back to the prehistoric as postulated by Franz Vera. The Common or Chase of Wyeswood (under a variety of spellings) had remained as an extensive 'waste' on the Trellech plateau until it was finally finished off by conifer afforestation and the last enclosures to farmland in the 19th Century.

In the run up to Christmas, Tubney Charitable Trust committed to covering 35% of the cost of the project. This, combined with wonderful support from the Countryside Council for Wales and the amazing generosity of hundreds of individuals, allowed us to complete the purchase in January. Since then, the remainder of our daunting budget has been found, with particularly large contributions from the Assembly via their Aggregates Levy Fund, and from the Waterloo Foundation which has welcomed the manner in which this project will demonstrate carbon sequestration through habitat creation.

Meeting expectations

With over £600,000 raised, the fundraising suddenly seems to have been the easy bit! It certainly didn't seem that way in the dark days of autumn 2007, but our faith has been rewarded. Now we are faced with the great expectations we have raised so widely - and great swathes of improved grassland in field after field!

Our new Project Officer, Annette Murray, started in May 2008. Our soils, habitat and species monitoring has commenced. The next couple of years will see us going through organic conversion, whilst silage cuts are taken under licence by a local farmer. In 2009, we intend trialling spring-sown oats as an alternative method of nutrient reduction. Other areas will be subject to a combination of tree-planting and natural regeneration in a couple of years, once the silage cutting has taken the edge off the current high nutrient status.

The local dormice are expected to respond quickly, whilst birds of mixed farmland should also thrive in the early years. The real prizes however, will come when a species-rich grassland flora has developed. GWT has a strong record in grassland restoration. We have ten years of experience of flower-rich grassland creation on seven of our reserves. Through our Gwent Grassland Initiative, we have also worked on species-rich grassland management or creation with some 200 landowners in the last three years. But Wyeswood will be unique in our experience both for its scale and for the extremes of current soil enrichment.

On the far side of Pentwyn Farm, semi-improved grassland bought by GWT in the 1990s has been colonised by green-winged and common spotted orchids from seeds blown over the hedge. We shall compare a range of restoration treatments on Wyeswood Common. We have a seed-harvester to gather local seed-stock, and we shall also use green hay, hand-gathered hay rattle seed and natural seed-rain in some areas.

Quarter century timescale

We think it will take 20 to 25 years before the backbone of the grassland and woodland habitats are sufficiently well-developed to introduce extensive grazing. Steaming heaps of avermectin-free dung should encourage plenty of dung-beetles, which will make this land a regular haunt of the local

John Robinson

Nightjar

greater horseshoe bats, which have a penchant for grassland beetles. We also hope for the arrival of hornet robber-flies - another top predator of the dung foodchain.

We would like the diversely structured woodland edge to become home to spreading bellflower and wood white and pearl-bordered fritillary butterlies. Our shopping list of bird colonists stretches to the mildly outlandish, such as nightjar and honey buzzard.

We shall feel the species-rich pastures to have come of age when we see milkwort and greater butterfly-orchid appearing in the sward. Shrill carder bee *Bombus sylvarum* is doing well on the Gwent Levels, but is now virtually unknown inland in Wales. The reappearance of this bee, and its congener *Bombus humilis*, will be another sign of success.

One of the most exciting Welsh wildlife discoveries in recent years has been the finding of the Red Data Book rugged oil-beetle *Meloe rugosus* on a smallholding just north of the land we have bought. Its intricate and exacting lifestyle requires solitary bee colonies to thrive year on year around extensive flowery grasslands - if this bizarre beetle can hang on for a decade or two, then Wyeswood Common could become responsible for maintaining its survival as a British species.

We have a long way to go in re-creating Wyeswood Common, but we are now making a start, thanks to the support and generosity of so many people. Given what climate change threatens, we just pray we have started soon enough.

Julian Branscombe is Chief Executive of Gwent Wildlife Trust.

1 A range of the supporting documentation for the Wyeswood Common project can be accessed online at www.gwentwildlife.org

O'r Gwyrdd i'r Gwyllt

Mae cynllun ar waith i droi 104 erw o dir pori arddwys yng Ngwent i fod yn hafan ar gyfer byd natur. Pan ddaeth y tir hwn ar werth yn 2007, ar gyrion gwarchodfa Fferm Pentwyn ac yng nghyffiniau safleoedd pwysig eraill i fywyd gwyllt, roedd yn gyfle rhy dda i Ymddiriedolaeth Bywyd Gwyllt Gwent ei golli.

Ofreuddwyd gychwynnol, datblygodd syniad pendant o droi'r glaswelltir anniddorol hwn yn borfa goediog. Y nod yw creu brithwaith o goetir a glaswelltir blodeuol a fydd yn cael ei bori gan dda byw a gaiff grwydro'n rhydd drwy'r safle. Cafwyd cymorth hael i brynu'r tir, yn rhannol oherwydd potensial y prosiect i ddangos sut y gall creu cynefinoedd helpu atafaelu carbon a hefyd oherwydd y gallai fod yn elfen allweddol mewn strategaeth i adfer a chreu cynefinoedd ar hyd a lled de-ddwyrain Cymru. Gall gymryd 20-25 o flynyddoedd cyn y bydd modd cyflwyno stoc. Ond mae profiad ymarferol yr Ymddiriedolaeth o greu ac adfer glaswelltiroedd dros y ddegawd ddiwethaf yn mynd i fod yn gymorth i lwyddiant y prosiect. Cyn y gellir plannu coed ac annog atgynhyrchiad naturiol bydd rhaid lleihau'r maeth yn y pridd, drwy dorri silwair ac efallai tyfu ceirch gwanwyn am gyfnod.

Fe arhoswn yn eiddgar am y dydd pan fydd tegeirianau llydanwyrdd yn tyfu yn y glaswelltir, iâr wen y coed yn hedfan ar hyd ymylon y goedwig a'r chwilen olew arw Meloe rugosus yn mabwysiadu'r llecyn hwn fel ei chadarnle Prydeinig!

Conserving Wales' last semi-wild ponies

All photos: David Anthony Murray

Winter coats at Cwmdu

Native ponies have roamed freely in Wales for perhaps three millennia. A century ago, an estimated 10,000 untamed beasts were an integral part of our remotest landscapes, from the Llanrhidian marshes to the Carneddau massif. Precious cultural heritage, they have helped define Wales' history and character. Today, relatively few survive, with potentially alarming consequences for our rich biodiversity. DAVID ANTHONY MURRAY reports.

We have often taken for granted the sight of indigenous Welsh ponies hugging hillsides. A chance encounter with a wild herd was once commonplace. Today, wild equines living in a 'state of nature', not owned but left to their own devices, are relegated to a few corners of the highest mountains and most isolated marshes. We can track down ponies which might appear to be wild, but which are owned and managed. These 'semi-wild' or 'semi-feral' ponies are rarely handled and are not fully controlled by their owners. They still run in natural herds, grazing extensively on Wales' tidal flats, moorlands and mountains.

Farmer-breeders

Many owners of semi-wild ponies are farmers and dedicated breeders. They often belong to Wales' official breed association, the Welsh Pony and Cob Society (WPCS), set up 107 years ago to protect this unique equine heritage. All semi-wild, that is hefted, WPCS-registered ponies are accurately described as semi-feral Welsh Mountain (Section A) ponies and have pedigrees. Their ancestors can be traced back over more than a century through stud books. Most breeders of semi-feral pedigree ponies

are also members of recognised Hill Pony Improvement Societies (HPISs). Twenty-five HPISs exist in southern, western and central Wales (see map).

Some independent farmers breed semi-wild ponies that might resemble the recognised breed but that have no pedigree. These may be described as 'Welsh mountain'. For example, the Carneddau plateau herds of Snowdonia[1] are Welsh mountain ponies of unrecognised modern origin.

Declining genetic population

The number and sizes of Wales' semi-feral pedigree herds have declined alarmingly over the last thirty years. The number of stallions has nearly halved. Many irreplaceable breedlines face eventual extinction. Upland herds - those living beyond approximately 200m above sea level - are particularly threatened.

A rare breed's number of actively breeding females indicates how threatened it is. In 2008, only about 760 semi-wild Welsh Mountain mares remain throughout Wales. This diminishing sub-population of the Section A pony is officially classified by Britain's Rare Breeds Survival Trust (RBST) as 'semi-feral' and 'Rare Vulnerable'.

Declining demand

Today there is a rapidly declining demand for semi-wild Welsh Mountain ponies. The cost of rearing foals for autumn market often exceeds the selling price. With the notable exception of support from the Horserace Betting Levy Board, there is little financial incentive. Farmers are increasingly discouraged from breeding pedigree stock.

A recent European requirement for all equines to have passports has encouraged some Welsh farmer-breeders to either reduce herd sizes or sell up, eradicating breedlines. The curtailment of breeders' traditional grazing rights due to restrictive regulations on some Welsh commons exacerbates this serious situation.

Cultural and genetic heritage

Does it matter if our Welsh Mountain ponies disappear forever from their traditional strongholds? Should the breed be preserved only on enclosed farmland, in lowland studs and in 'artificial' or 'show' herds? Semi-wild indigenous ponies represent precious cultural and genetic heritage and a significant, largely unexploited, tourist attraction. Dedicated farmer-breeders believe that it is vital for the future of the WPCS, and for Welsh heritage and biodiversity, that ponies continue to 'run' on the hills.

Many breeders of domesticated Section A ponies traditionally have replenished their breeding stock from hardy semi-feral breedlines within HPISs. The disappearance of foundation herds will jeopardise the Section A breed's long-term chances of survival

A hardy pony from Snowdonia's Carneddau Plateau

in its present form or 'type'. The Section A breed is also the foundation stock for Section B ponies and Section C and D Welsh Cobs. Extinction of semi-feral breedlines could adversely affect the future development, appearance and status of these breeds.

Halting genetic erosion

Over the last century, Section A breeders have selected physical characteristics that they believed defined the Welsh Mountain breed, favouring some traits and animals, rejecting others. Unwanted characteristics have been gradually bred out, reducing variety or diversity within the breed.

This process of so-called 'improvement' may be regarded as 'genetic asset stripping'. Genetic erosion of the breed escalates with the extinction of each genetically unique semi-feral breedline. Further dilution of the gene pool could threaten the breed's future ability to cope with extreme Welsh environments. Failure to halt genetic erosion could have serious consequences for Welsh biodiversity.

Conservation roles for semi-feral ponies

Semi-feral ponies are needed to help manage Wales' varied wildlife habitats. Able conservationists, they can benefit wild flowers, invertebrates, birds and mammals because they graze and browse selectively, creating vegetation mosaics of taller and shorter vegetation. Unlike sheep, Welsh Mountain ponies generally take little heather and, being small and light, they are ideal for grazing sensitive wetland sites that cannot withstand heavy trampling by cattle.

Empirical and anecdotal evidence of the grazing characteristics of semi-feral Welsh Mountain ponies is limited[2]. Untamed ponies have hardy constitutions and require only minimal husbandry. Some herds graze happily even beyond 610m above sea level. They are resourceful and adaptable, maintaining excellent body condition year-round outside if sufficient wild forage is available. They cope well on exposed cliff, marsh and moorland, needing only natural shelter, and develop woolly winter coats to withstand extreme weather.

Results of an unpublished HPIS survey in 2004[3] demonstrate their versatility. Semi-feral ponies will graze poor-quality forage, often preferring shorter over longer grass swards. Many herds eat fine grasses, coarser grasses, coarse herbs, rushes and sedges and browse available deciduous regrowth. Several herds will strip bark from shrubs and trees. Most never or rarely consume flowering or harmful plants. Many habitually trample bracken stands to varying extents throughout the year when foraging.

Environmental asset stripping

Maintaining a link between Welsh Mountain ponies and their traditional environments is vital if hardiness, thriftiness and disease resistance are to be retained. Herds removed from their native habitats could quickly unlearn 'desirable' grazing behaviour, a phenomenon that may be described as 'environmental erosion' or 'environmental asset stripping'.

Semi-feral foals learn hefting, how to thrive on meagre winter vegetation and where, how and what to eat from their mothers. Land managers may, in

Dowlais ponies

future, need to harness learned grazing behaviour to help targeted wildlife and habitats to flourish.

Current demand for ponies in nature conservation

The need for semi-feral ponies in conservation roles is likely to increase. Recent agricultural policy reform in Wales could lead to a considerable reduction of sheep and cattle farming, especially in the uplands. "Careful and appropriate grazing can mean the difference between wildlife thriving or vanishing completely," explains grazing scheme organisation *Pori, Natur, a Threftadaeth* (PONT).

Grazing ponies are already helping to prevent biodiversity loss caused by undergrazing on some national nature reserves. The disappearance of semi-wild ponies from Welsh national parks "would seriously reduce the options available for achieving effective conservation of priority biodiversity habitats," stresses Paul Sinnadurai, the Brecon Beacons National Park ecologist.

Cwmdu ponies in Winter

A strategy for conserving semi-feral pedigree herds

Remarkably few semi-feral Welsh Mountain ponies are used in Welsh grazing schemes. Conservation agencies often have ignored their genetic value, heritage importance and conservation grazing potential. Instead, managers have relied largely on non-pedigree ponies of unknown origin, reducing any need for farmer-breeders to maintain semi-feral pedigree herds.

Carneddau in Winter

Some unregistered ponies, e.g. the Carneddau herds, represent valuable genetic assets. These ponies deserve registration and conservation status because they exhibit potentially desirable anatomical, physiological and behavioural characteristics that might be absent in registered breedlines. Generally, however, available semi-feral pedigree youngstock should be the preferred choice for future Welsh biodiversity management programmes.

Some Welsh land management agencies use foreign breeds, e.g. the Polish Konik horse or the Asian Przewalski horse, in conservation programmes. This practice also accelerates the extinction of our semi-feral pedigree sub-population because conservation grazing opportunities are, and will be in future, more or less limited. One or other Welsh Mountain pony breedline will likely perform any required grazing task at least as efficiently as any exotic pony. Foreign breeds should not be employed if suitable native ponies are available.

"It's also important to choose ponies from herds of local origin," believes farmer-breeder Roger Davies. "Local Welsh Mountain ponies have evolved over many centuries to cope with local conditions." An increasing practice of using other, less suited, (that is, less locally adapted) native breeds in grazing programmes, further hastens the demise of Welsh Mountain herds. For example, recently imported Exmoor ponies, whilst they do an excellent job in restoring heathland, are geographically misplaced on the Trellech Plateau.

Although appropriate Government support is essential, the survival of semi-feral breedlines will depend ultimately upon whether the WPCS can successfully market the progeny of its semi-feral mares for conservation purposes. In order to maintain and improve opportunities for wildlife to flourish on our moorlands, farmer-breeders must be encouraged to rear suitable pedigree stock for grazing schemes. "We have to provide incentives to

graze with ponies, with individuals and organisations buying and selling animals, to improve wildlife," agrees Paul Sinnadurai.

The semi-feral pony's real value

The further decline of Wales' semi-feral pedigree pony is preventable. Land managers and farmer-breeders are beginning, at last, to recognise the genetic worth and conservation grazing potential of this pony. Immediate action must ensure the long-term survival of remaining herds on their native heaths, moors and marshes. We would be providing the best chance of successfully protecting the greatest variety of wildlife in the face of radically altering farming practices, rapidly evolving landscapes and a gradually changing Welsh climate.

Sustainable landscape management, optimal biodiversity conservation and maintenance of farmer-breeder traditional lifestyles are intimately related objectives within Wales. These goals may be fully attainable only if the genetic complement of remaining semi-feral herds is conserved and appropriately managed for conservation grazing.

David Anthony Murray is a freelance conservation scientist, writer and explorer. He is a Fellow of the Royal Geographical Society, an Earthwatch Institute Fellow and a Millennium Fellow.

1: Neale, J. 'The Carneddau – A landscape of the past and the present.' *Natur Cymru*, Issue No. 14, Spring 2005. p 31.

2: Murray, D.A. 'Current status, with reference to conservation grazing, of the Welsh Mountain (Section A) semi-feral pony following decoupling of farm subsidies through CAP reform in Wales – a scoping study', 380 pages. Funded and published by the Countryside Council for Wales, 2007. See the Publications and Research section on CCW web site, **www.ccw.gov.uk** and on the author's web site, **www.matilda.boltblue.net**

3: Murray, D.A. 'The Welsh Mountain (Section A) semi-feral pony: grazing characteristics and breed profile – a preliminary analysis.' Unpublished survey, 2004.

If any group / individual would like to receive a copy of the report on CD, please write to David Anthony Murray at: MATILDA, P.O. Box 550, Leicester, LE5 2WB, enclosing a cheque for £20 (payable to D A Murray) to include the cost of preparation, packing and postage.

Oes merlen eto?

Prin y gwelir merlod gwirioneddol wyllt yng Nghymru. Mae merlod mynydd fel rheol yn eiddo i rywun ond dim ond yn anaml y cânt eu trafod gan eu perchnogion. Mae'r merlod 'lled-wyllt' hyn yn frîd cydnabyddedig gyda phedigri. Disgrifir nhw, yn gywir, fel 'Merlod Mynydd Cymreig lled-wyllt'. Mae 'na hefyd ferlod mynydd lled-wyllt sydd heb fod â phedigri, fel rhai'r Carneddau.

Mae nifer y merlod lled-wyllt â phedigri yn prinhau ac mae'r greoedd sy'n pori ucheldir dros 200m dan fygythiad difrifol. Mae'r galw amdanynt wedi lleihau oherwydd cost magu ebolion, yr angen i gael pasbortau, cyfyngiadau ar hawliau pori mewn mannau a hefyd diffyg ymwybyddiaeth o'u pwysigrwydd.

A ddylen ni boeni am eu tranc? Maen nhw'n elfen draddodiadol o'r tirlun, yn atyniad i ymwelwyr ac yn adnodd genetigol sydd wedi bod yn bwysig i atgyfnerthu stoc fridio merlod domestig - yn cynnwys cobiau. Gallant hefyd helpu cynnal cynefinoedd bywyd gwyllt; maen nhw'n bwyta gwair garw a hesg, yn sathru rhedyn ungoes, maen nhw'n ddigon ysgafn i bori gwlypdiroedd a gallant gynnal eu cyflwr drwy gydol y flwyddyn. Gallant bori ar glogwyni, rhostir ac ucheldir a byw heb fawr ddim cysgod. Dysgant yr arferion hyn oddi wrth eu mamau a gallent eu 'dad-ddysgu' pe bai'r greoedd yn cael eu cyfyngu i gaeau amaethyddol. Mae cadwraethwyr wedi anwybyddu'r merlod pedigri lled-wyllt i raddau helaeth ac mae'r arfer o ddod â merlod estron - o Loegr, o dramor, neu o darddiad arall anhysbys, yn lleihau'r angen i ffermwyr gynnal greoedd pedigri lled-wyllt ac felly'n cyflymu eu diflaniad.

Gellir atal difodiant y ferlen fynydd Gymreig lled-wyllt. Mae lle i gydblethu rheolaeth gynaliadwy o'r tirlun, cadwraeth natur a chynhaliaeth ffermwyr-fridwyr - ond dim ond os caiff geneteg y greoedd lled-wyllt sy'n weddill eu gwarchod a'u rheoli at ddibenion pori cadwraethol.

Valleys Regional Park

Mandy Marsh

Within an exciting, rumpled topography, the South Wales valleys hide many environmental treasures, and are home to many people. Bringing people and environment together, and working with communities so that 'the Valleys' becomes a byword for a high quality environment for people and nature, is the task facing Wales' first Regional Park, as ***BERRY COFFMAN*** *explains.*

The South Wales valleys have a distinctive landscape. Although this region is defined by its topography, its distinctiveness lies in the density of its population next to and on the doorstep of green space with a tremendous biodiversity resource. Indeed, this resource is the outcome of the great variation of geology, topography, altitude, water courses and vegetation, and human interaction and influence. 'The Valleys' is a term that represents not only a landscape but a people and their social, cultural and economic past.

If you looked out of the window of a plane at the valleys landscape below, you would see a flattened patchwork of green spaces, settlements, rivers and transport corridors. But from low ground, hillsides and mountains rise up around you, intersected by gorges and valleys, an intensity of form and shape which characterise this unique area.

Over the last three years organisations operating across the environment, heritage and tourism sectors have been identifying new ways of working together to plan and prioritise projects, and to identify opportunities and issues to achieve shared goals and vision for the area.

In effect, the Valleys Regional Park is a way to work collaboratively, cross-boundary and cross-sector.

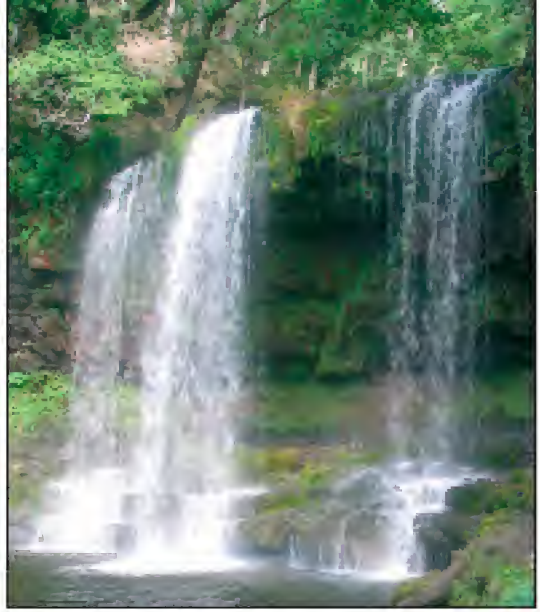
The overall aim of the project is to raise the quality of our countryside, tourism and heritage assets and, in turn, to regenerate the area and change how it is perceived. The Valleys Regional Park is unique as Wales's first regional park, covering an area of over 200,000 hectares, and is home to over one million people.

Opportunities and assetts

The valleys have traditionally been undervalued in terms of their natural beauty, natural and cultural heritage, and potential to attract visitors. They have the potential to offer far greater opportunities for outdoor recreation, environmental education, heritage-based and activity tourism than has yet been realised. They also have the potential to help halt the decline of internationally important species such as otter, lapwing, skylark, various fritillary butterflies, various bat species, and habitats such as heather moorland, oak and beech woodland, rivers and streams, just to name a few.

Existing assets and facilities such as the Country Parks and Local Nature Reserves could support greater visitor numbers, and become part of an initiative that develops greater ecological connectivity across the region. Within the area there is a fantastic network of walking and cycling routes that provide the ideal opportunity for getting out into the countryside. Harnessing the opportunities presented by the interaction of these components is what makes the Valleys Regional Park such an exciting initiative.

As governments and policy makers alike begin to realise the economic and social potential of the environment on the fringe of communities, so the Valleys Regional Park becomes an opportunity to prove this or bring this theory to life. Indeed life is what it's all about. Projects that underpin this initiative range from developing our ranger and wardening service to engage the local community, to enhancing and protecting our existing species and habitats. Where you have people living on the edges of green space, the task seems to be about balancing the users and the environmental interests.



Berry Coffman

Encouraging access and understanding of local species and habitats need not be at the cost of those sites.

An example of this is at Dare Valley Country Park, where a viewing scheme that was first developed by the RSPB as one of their *Aren't Birds Brilliant* projects, encourages visitors to follow the progress of a resident peregrine family. The project is now managed by Rhondda Cynon Taff Council. This project has many benefits. It gets us up-close and personal with species on our doorstep; it instills a sense of what's unique or important about our local park; it gives us that memorable experience that may encourage us to return; and it protects a species against detrimental footfall. It also sends a clear message to those who are thinking of stealing eggs or disturbing the site, that they are being watched: great deterrent to environmental crime.

In many cases, particularly where poor and deprived communities exist next to open and green space, there is a lack of relationship with the landscape. This can often result in the abuse of the landscape through littering, fly tipping, and vandalism. As agencies, we need to work together to improve understanding and develop pride and ownership of the environment in our local population. We can improve the quality of our interpretation and signage, we can engage communities through rangers and wardens and we can develop education programmes that use the valleys as an outdoor classroom. It is a mix of

Berry Coffman

Mandy Marsh

Cydweithio yn y Cymoedd

Mae'r 'Cymoedd' yn cynrychioli un o dirweddau mwyaf adnabyddus Cymru, a hefyd yn cyfleu cymdeithas arbennig gyda hanes a diwylliant unigryw. Mae gwahanol fudiadau wrthi'n ceisio canfod ffyrdd o gydweithio i wella ansawdd yr amgylchedd naturiol a hanesyddol yn yr ardal hon ac i gynyddu'r cyfleoedd sydd ar gael i ymwelwyr a thrigolion fwynhau'r dreftadaeth hon. Drwy hyn gobeithir adfer yr ardal yn economaidd a newid canfyddiad pobl o'r rhan hon o Gymru. Sefydlwyd Parc Rhanbarthol y Cymoedd, y parc rhanbarthol cyntaf yng Nghymru, i wireddu'r dyhead hwn. Mae'n ymestyn dros 200,000 hectar ac yn cynnwys poblogaeth o dros filiwn o bobl.

Dyma gyfle i ddangos bod yr amgylchedd ar gyrion mannau poblog yn dwyn budd cymdeithasol ac economaidd i gymunedau lleol. Y nod fydd cynyddu'r cysylltiad rhwng cymunedau a'u tirlun - dod â'r wlad yn ôl yn rhan ganolog o fywydau pobl a chynnig profiadau cofiadwy ac uniongyrchol iddynt, fel gwylio bywyd gwyllt er enghraifft, er mwyn ennyn balchder a chynyddu dealltwriaeth o hynodrwydd eu bro a lleihau troseddau a difaterwch.

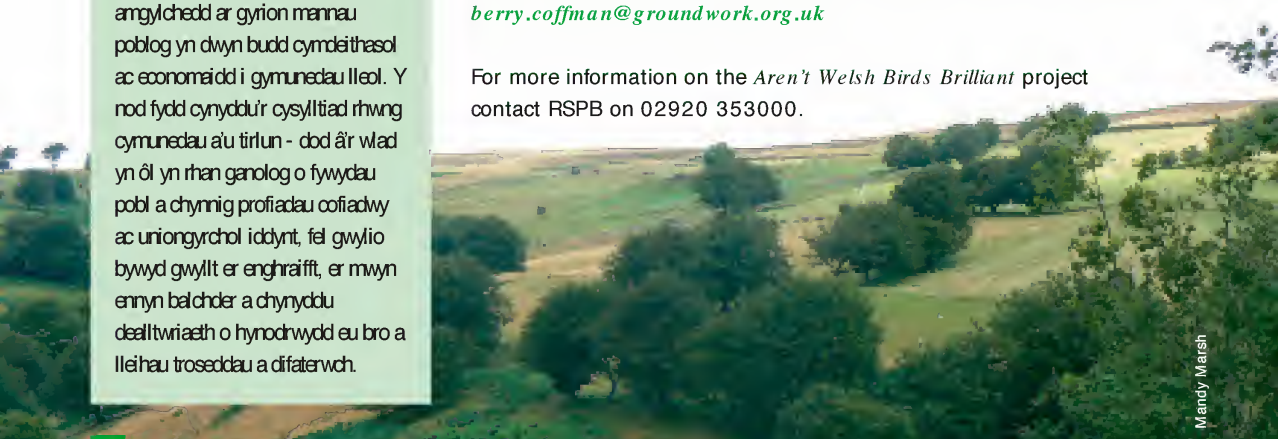
outreach to locals and engagement of visitors that will create the most lasting and immediate change.

In short, the Valleys Regional Park will enable better co-ordination in promoting, enhancing and managing the area's environment, heritage and tourism assets, for the benefit of both local people and visitors. It will encourage more activity - walking, cycling, horse riding and mountain biking - whilst encouraging greater understanding of our unique environment and the history that has shaped our landscape and people. It will engender pride in our local populations, whilst tackling barriers to enjoyment, such as fly-tipping, litter and vandalism.

This is ambitious, and undoubtedly the Valleys Regional Park will grow and change over time. We are currently developing a 20 year strategy with a 5 year action plan. We hope Convergence funding and other EU and domestic funding will help the Park develop in its critical, initial 5-7 years, and establish it as a model for delivering services collaboratively. Most of all we hope that "the Valleys" becomes synonymous with a high quality, diverse environment and the welcome to go with it.

Berry Coffman *is the Valleys Regional Park Coordinator. For more information on any aspect of the Valleys Regional Park contact her on* ***berry.coffman@groundwork.org.uk***

For more information on the *Aren't Welsh Birds Brilliant* project contact RSPB on 02920 353000.



Mandy Marsh

All images: Shane Farrell

Life in the Leaf Litter

Globular springtail *Dicyrtomina saundersi*

Leaf litter is an essential part of any woodland ecosystem; but how many people are aware of the incredible faunal diversity that can be found with very little effort? On a recent visit to north Wales, ***SHANE FARRELL*** *made some surprising and exciting finds as well as, according to records currently available, what appears to be a new species of springtail for the whole of Wales.*

I have a lifelong interest in natural history albeit purely on an amateur basis; my interests have ranged from insects to birds and then back to insects again. Moths and butterflies (Lepidoptera) are still my main interest but personal circumstances have severely curtailed the time available for my hobby over the last year or so.

Over the winter of 2007-08, during breaks from the excitements of decorating, I managed a few minutes each evening in the garden, attempting to locate interesting subjects for photography. This activity proved surprisingly fruitful and one of the main orders I found in abundance was springtails (Collembola). These animals are a very varied group and can be found across the whole of the country. There are around 250 known species in the UK and densities in the average ecosystem vary from 10,000 to 100,000 individuals per square metre. As such, they are one of the most abundant animals on earth. They feed on liquid matter and solids in suspension and play an important role within the decomposition process.

My garden, thankfully, was not the exception to the norm, and with the help of a fellow entomologist, Frans Janssens in Belgium – isn't the internet a wonderful thing sometimes? - I have identified at least ten different species with little effort (*Tomocerus minor*, *Dicyrtomina saundersi*, *Orchesella villosa*, *O. cincta*, *Lepidocyrtus cyaneus*, *Entomobrya intermedia*, *Entomobrya albocincta*, *Vertagopus arboreus*, *Isotomurus palustris* and *Hypogastrura purpurescens*). Unfortunately, many of these animals require special methods to find and identify as they range from only 0.25mm to around 6mm in this country. Sometimes this requires the retention of a specimen. However, the larger ones (including those mentioned above) can usually be identified with a good quality photograph or a hand lens.

Dicyrtoma fusca - a new record for Wales?

"Why is he babbling on about his garden?" you may justifiably ask at this point. The answer, you will be pleased to know, is that it was through the location of such attractive and intriguing animals at home that I became interested in finding out what else lived within the soil and, in particular, leaf litter.

In any sample of leaf litter or soil you can expect to find specimens from many different groups of animals. I was recommended to try an efficient searching method by two fellow entomologists. This basically involves sieving through the litter to allow animals to drop into a bowl. I found a cost-effective method is to buy a standard chip-pan basket, which is half-filled with leaves and then shaken vigorously into a cheap (preferably pale coloured) washing-up bowl – it is not recommended that you use the one reserved for the normal washing-up if domestic harmony is to be maintained! This method generally causes no damage to the inhabitants of the sample and both the animals and the litter should be returned whenever possible to the site they were collected from.

At a recent visit to Gwernymynydd, near Mold in Flintshire, I stopped at the side of the road and collected a small sandwich bag full of leaves in the hope that I might find something interesting. Among the usual selection of springtails, including many of those referred to above, was a smaller 'globular' springtail, which was unfamiliar to me. At around 2mm long it was hard to define any detail even with an 8x hand lens. However, via the photographs taken of this animal (one of several found at the site) I was able to observe the key identification features to confirm *Dicyrtoma fusca*. This species has never been recorded in Wales before according to the national recorder of this order and to be prudent I will be confirming one

Click beetle *Adrastus pallens*

Springtail *Orchesella cincta*

Pseudoscorpion *Chthonius ischnocheles*

specimen with him, given the importance of this record.

Red mite

One of the predators of springtails is an intriguing and enigmatic animal, the very existence of which is to most people a mystery, despite being present in some habitats at high density; this animal is the pseudoscorpion. Having seen photographs on the internet and hearing of them from a number of sources, it became something of a quest to find and photograph one. The pseudoscorpions (Pseudoscorpionida) are members of the large group of animals known as arachnids. This is the name normally associated with spiders (Araneae) but also applies to pseudoscorpions, mites and ticks (Acarina) as well as the harvestman 'spiders' (Opiliones) and true scorpions. Thankfully, although many pseudoscorpions have a venom gland in their 'pincers' (pedipalps) they are usually only 2-4mm long and therefore bear no threat to humans, unlike their larger cousins. In fact, as they prey on mites and various destructive larvae, they are truly beneficial to us. Their small size creates the same photography and location/identification challenges relating to springtails and many other inhabitants of leaf litter.

Whilst searching through the litter from Gwernymynydd, I was very excited to find my first pseudoscorpion. It displayed what I now know as typical behaviour, initially freezing as it was shaken out of the leaves and then slowly walking forward with pedipalps extended. They react to any nearby movement by instantly freezing or even jerking quickly backwards; these animals cam move as quickly backwards as they can forwards. The specimen was identified as *Chthonius ischnocheles*, a relatively common inhabitant of moist/damp leaf litter and soil. Subsequent to this find I have now located a further three pseudoscorpion specimens, all probably *Neobisium muscorum* but there is a possibility they are *Neobisium carpenteri*. This will be confirmed in due course as this would be a notable UK record.

Other arachnids present in good numbers are the spiders and also mites, which seem to be the most numerous next to springtails. Many of the spiders belong to the 'money spiders' (Linyphiidae) or are early instars, and are thus difficult or impossible to identify. Others are relatively large and readily identified, an example being *Pachygnatha clercki* which was located in the Welsh sample. Most of the mites in leaf litter are involved in the decomposition process but some are predatory on other animals of the soil. I have found several specimens like the one illustrated below which seem to have a hard casing of soil particles on their back. This presumably performs a protec-

Ground bug *Drymus sylvaticus*

Flower bug *Anthocoris nemorum*

Mite with soil particles on its back

Fannidae pupa

tive function. There are also specimens which are quite large and the red specimen shown was around 3mm long. I also regularly locate harvestman spiders along with other arachnids.

Specimens of Heteroptera (true bugs) are sometimes found, usually in ones and twos. *Drymus sylvaticus* and *Anthocoris nemorum* were both present from this site and I have also found *Scolopostethus affinis* and *Drymus brunneus* in different areas; all of these bugs are to be expected at most sites. The number of beetles (Coleoptera) has so far been low given the time of year which I searched. Of the beetles located and photographed I have managed to obtain identification on both of them. One was a representative of the rove beetles (Staphylinidae) *Anotylus sculpturatus* and the other a click beetle (Elateridae) *Adrastus pallens*. I have, however, regularly seen beetle larvae of varying types.

Pachygnatha clercki

Woodlice (Isopoda) and millipedes (Myriapoda) are commonly found in the litter; there is great variety in the size and shapes of the specimens that can be present. The common rough woodlouse *Porcellio scaber*, the common shiny woodlouse *Oniscus asellus* and the common striped woodlouse *Philoscia muscorum* seem to be the most abundant and will be familiar to readers by sight if not by name. Unfortunately, I have no real reference for the identification of millipedes and therefore I cannot be name specific. However, I have seen various forms of millipede, which really seem to like the damp conditions found on a woodland floor. Included within these have

Rove beetle *Anotylus sculpturatus*

been pill millipedes (Oniscomorpha), which resemble woodlice very closely but have many more legs and more uniform segments.

It will not surprise readers to learn that worms of many kinds inhabit the litter. There are massive numbers of flatworms and other worms of all kinds. It may though be slightly more surprising that good numbers of flies (Diptera) and their larvae can be present. One interesting dipterous specimen I found at the Welsh site was identified as being almost certainly a pupa of the *Fanniidae* family.

I hope that I have generated some interest in the minds of readers and an appreciation that even on the ostensibly worst days of the year in terms of weather and time of year, something of real interest can be found with very little effort!

Finally, a reminder regarding recording. If you do encounter specimens of any animals then I am certain that both your local Records Centre and also the administrators of the appropriate national recording scheme will be very pleased to hear from you! Many of the Orders referred to above are under-recorded and all records will be gratefully received.

***Shane Farrell** is Cheshire County Macro Moth Recorder and a keen amateur entomologist and photographer.*

Acknowledgements
Don Stenhouse – beetle identifications
Steve McWilliam – sifting methodology and tentative identification of diptera
Steve Judd – sifting methodology

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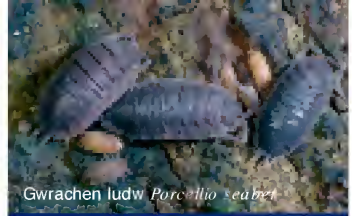


Gwrachen ludw *Porcellio scaber*

Bywyd gwyllt mewn gwasarn

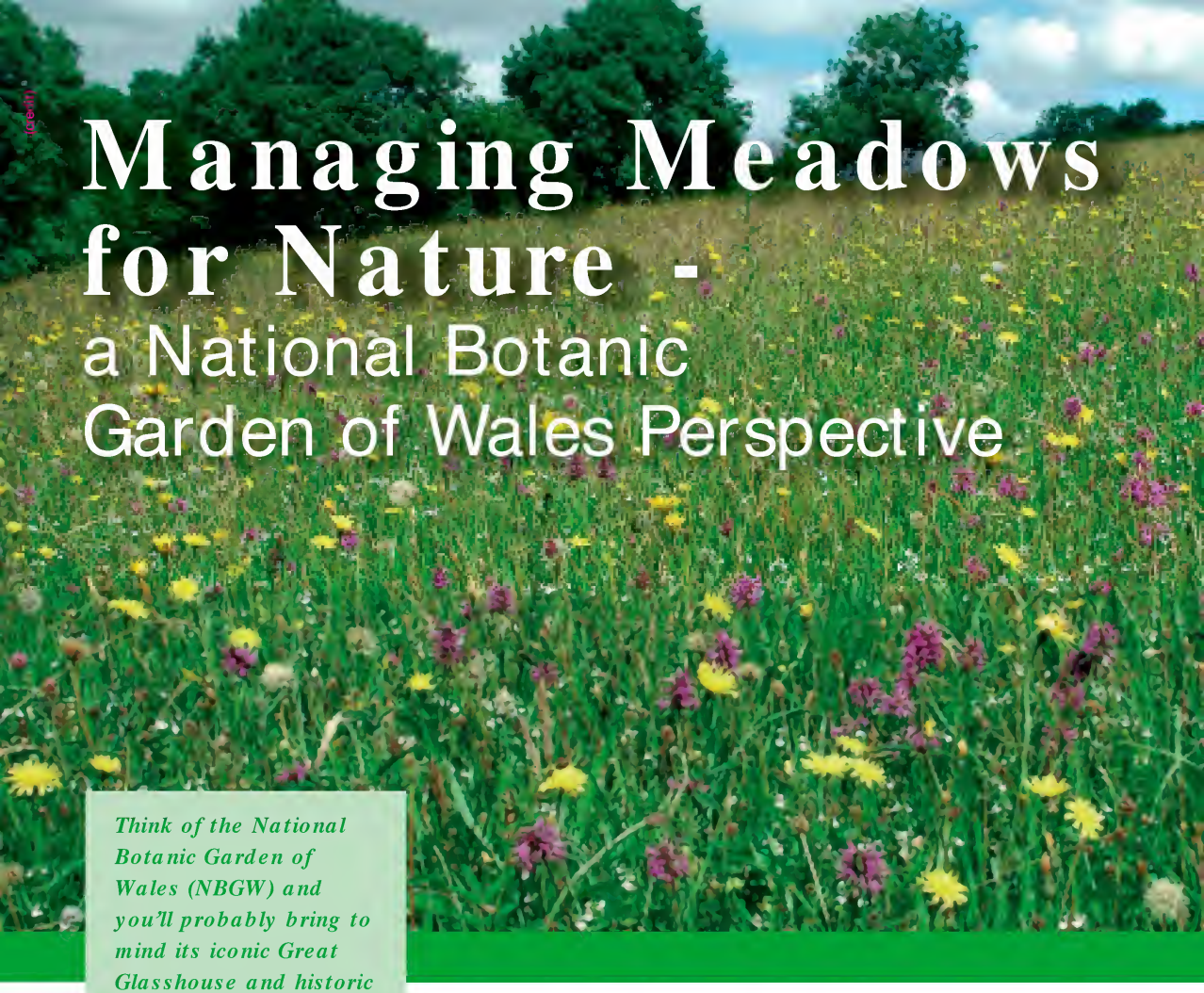
Hyd yn oed ar ddiwrnod sy'n ddigon sâl o ran tywydd mae modd dod o hyd i ryfeddodau bywyd gwyllt mewn llond bag o wasarn dail.

Gallwch ddisgwyl gweld sawl math o gynffon sbonc (Collembola), sy'n un o'r creaduriaid mwyaf niferus ar y ddaear. Mae 250 rhywogaeth yn y DU a bu'r awdur yn ddigon ffodus i ganfod rhywogaeth sy'n newydd i Gymru mewn dyrnaid o wasarn a gasglodd eleni o ymyl ffordd yng Ngwernymynydd, ger yr Wyddgrug.

Efallai hefyd y gwelwch ffug-sgorpionau, sy'n bwyta'r cynffonau sbonc. Mae'r creaduriaid bach hyn, sy'n mesur 2-4mm, yn perthyn i grŵp yr arachnidau. Dyma grŵp mawr o greaduriaid sydd hefyd yn cynnwys corynnod, gwiddon, trogod a sgorpionau go iawn.

Mae'n siŵr y bydd gwasarn yn cynnwys nifer o'r arachnidau eraill hyn hefyd. Mae corynnod a gwiddon yn niferus iawn ymysg y dail, ond bydd creaduriaid eraill i'w gweld hefyd - yn chwilod, pycsod, gwrachod lludw, miltroedion a sawl math gwahanol o fwydod.

Beth am roi cynnig arni - dim ond sospan ffrio sglodion sydd angen arnoch i roi ysgytwad i'r gwasarn, a phowlen i ddal y creaduriaid rhyfeddol a fydd yn syrthio allan!

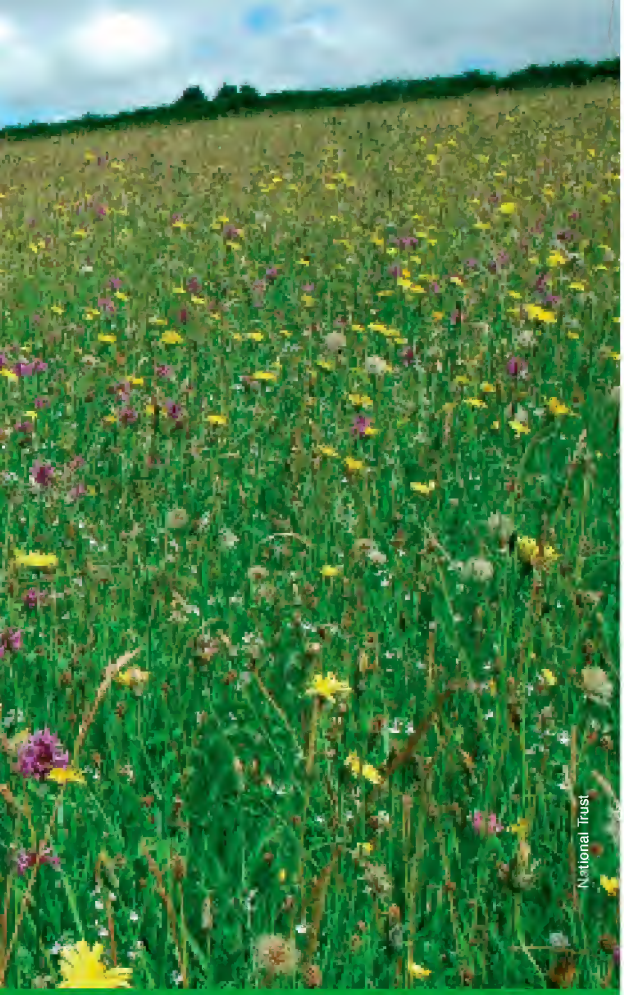


Managing Meadows for Nature - a National Botanic Garden of Wales Perspective

Think of the National Botanic Garden of Wales (NBGW) and you'll probably bring to mind its iconic Great Glasshouse and historic Double Walled Garden. But there is also a wonderful organic farm attached to the NBGW, spread over 20 fields and covering 400 acres. This is managed not only as a working farm, but as one that actively encourages the spread of native wild plants. ***TIM BEVAN*** *and* ***BRUCE LANGRIDGE*** *describe some of the lessons which have been learnt.*

Grassland at the NBGW has a long history of being managed for aesthetic purposes, primarily as parkland. The Middleton family first established an estate here in the early 17th century and there are a few lumps and bumps in the ground to show where the original Middleton Hall once stood.

Much more evident today is the landscape that was the vision of William Paxton, a Nabob, who purchased the estate in 1799. He engaged the services of Samuel Lapidge, a former assistant to Lancelot 'Capability' Brown, to design an open parkland landscape that was popular in the large estates of the time. Maps of the period indicate an open, hedge-less landscape dotted with mature trees and small circular copses with clear lines of sight between. As the fortunes and ambitions of subsequent estate owners gradually waned, so the landscape lost its early 19th century precision. By 1930, the land had been acquired by Carmarthenshire County Council and was divided into seven starter farms.


National Trust

Flower-rich meadow

When the NBGW took possession of the land in the late 1990s, it was clear that much of the farmland had escaped the intensive agricultural treatments that had blighted much of the British countryside.

Decisions

We were therefore fortunate to have inherited meadows and pastures containing plants that are no longer commonly found in the countryside. Not all of them were obvious though. The decline of the smallholders had led to a gradual spread of rushes and coarse grasses, and the practice of traditional hay making had largely been replaced by silage.

So, we had some decisions to make. As a botanic garden, we clearly wanted to maintain and improve the kind of conditions that allow native grassland plants to thrive. How should we do this? From the start, we decided not to use any chemical inputs of fertilisers or sprays and to manage the land according to organic principles. This stopped us using herbicides to control invasive plants, such as tufted hair-grass *Deschampsia caespitosa*, soft rush *Juncus effusus* and bracken *Pteridium aquilinum*. If we used it, we could not be sure of the damage we might inadvertently cause to other life in the soil.

Next, we enlisted the help of some of Wales' foremost naturalists to help us target particular habitats, plants and animals for conservation. The likes of Quentin Kay, John Savidge, Richard Smith, Maurice Rotheroe, Kevin Davies, Jan Crowden and Alan Orange carried out surveys on plants, fungi, lichens, lepidoptera, mammals, amphibians, reptiles and birds. Once we had developed an understanding of the ecological value of our fields, we had some more decisions to make. Which fields needed the most urgent attention? Which would benefit from cutting and which needed grazing? When would we cut and when would we graze? What would we graze with?

We live in a target culture so it was time to set targets for each grassland type and then to define the management to help us reach that target.

Hay making

By tradition, species-rich wild flower meadows need to be cut for hay, and the biodiversity benefits of taking a late cut, i.e. after mid July, are well known.

James Robertson

Traditional hay-making

Many plant species that have declined in their distribution across Wales have time to grow and seed, ground nesting birds have time to breed, whilst a diverse range of insects and spiders provide a rich larder for a long food chain including birds, amphibians, reptiles and mammals.

Here at the NBGW, we chose two potentially species-rich large meadows that had been cut for silage, to manage as a traditional hay meadow. The first was directly adjacent to the formal botanic garden, a location that would provide us with great opportunities for interpreting its story for NBGW visitors.

Initially, hay cutting and the removal of the cuttings reduced the fertility of the soil. This helped to reduce coarse grass cover, which in turn allowed more wildflowers to establish. It is common for farms to cut the entire hay field in one go. While this is not a problem for flowering plants it may be a problem to the invertebrates living on the plants. This cut and removal of all plant material removes the shelter and food source in a very sudden upheaval. It is not just the insects affected – small mammals and birds suddenly have cover and feed material removed. With this in mind, we routinely left refuges of uncut material in amongst the hay meadows, rotating this area from year to year.

One major problem we had was in deciding when, and to what extent, we should graze the hay meadow. Helpful advice was often contradictory. Should we graze lightly or hard in spring, how late should we graze, is it better to use cattle, sheep or horses?

We have now settled on a pattern. Spring cattle grazing keeps the larger grasses in check whilst autumn cattle grazing poaches the ground, providing opportunities for plant seeds to establish new territories.

An expanding flora

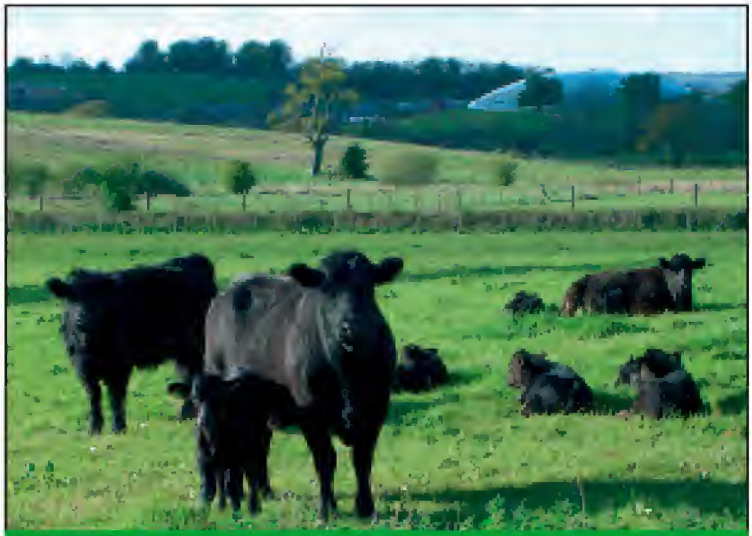
So what plants have arrived, or perhaps have re-emerged from seeds in the soil, given this treatment?

Initially, overgrown large clumps of Yorkshire fog, cocksfoot and soft rush were dominant and few wild flowers were visible. Now, finer grasses and wood-rushes are more dominant, allowing colourful patches

James Robertson

Lady's smock

Carl Stringer



Welsh blacks and the Great Glasshouse

of blue and purple flowered plants such as black knapweed, self heal, betony, bugle and devil's-bit scabious. These contrast with yellow rattle, meadow buttercup, common cat's-ear, autumn hawkbit, burnet-saxifrage, great burnet, stitchworts, pignut, meadow vetchling, vetches and pockets of common spotted and greater butterfly orchids. Wet flushes are indicated by patches of ragged robin, greater birds-foot trefoil, lousewort, foxtail grasses, meadowsweet, fleabane, sedges and rushes. Lady's smock attracts a profusion of orange-tip butterflies in the spring.

The second hay meadow, located far from the formal botanic garden, was much drier and was sheep-grazed in the spring and over winter, with an August hay cut. Before hay management, sorrel and coarse grasses were dominant. Change has been more gradual here, but noticeably different from the other hay meadow. Fine grasses, red clover, meadow buttercup, hawkweeds, hawkbits, yarrow and yellow rattle are now flourishing and there are prominent, growing patches of heath-spotted orchid and lousewort. Buoyed by the success of these hay meadows, we now have plans to cut hay in other fields over the next few years.

Cattle grazing

Much of the estate is cattle and sheep grazed pasture. In the first years of our grazing management, it soon became obvious that sheep were, true to their reputation, very fussy grazers. On introducing them to a damp meadow with little botanical interest apart from a few patches of great burnet, we found they grazed out the burnet in one weekend - a hard lesson but the best way to learn!

From our experiences with Welsh Blacks, cattle do not appear to be as selective and are good at pasture 'topping' – removing coarse vegetation. If they are not too heavily stocked, they can produce an interesting mosaic of grass heights, giving these fields a 'rough' appearance where the clumps of long grass provide a refuge for invertebrates. A wide diversity of fine and coarse grasses reflect the underlying soil type and hydrology, and on bright summer days the air can be heady and scented by the sweet vernal grass. The flowering plants found here are quite tolerant of lower grazing pressure and include many plants that are typical of Welsh pastures such as the white flowers of yarrow, plantain and pignut, and the yellows of buttercups, birds-foot trefoil and tormentil.

In wet areas cattle will trample and poach, which can cause damage to sensitive plants and create large bare areas into which invasive weeds can flourish. Bearing this in mind, some mild trampling by cattle feet is not a bad thing as it allows seeds deeper down in the soil to germinate and provides gaps for new wildflower seeds to establish. Cattle are also used on these wet areas to keep down the invasive soft rush. One of the most satisfying results of this is the opportunity it has given for Carmarthenshire's county flower, whorled caraway, to thrive. Once confined to just the occasional patch, there are now places that are covered in a white carpet of whorled caraway blossom in July, looking like a summer blanket of snow.

James Robertson

Milkwort

In our species-rich wettest meadows, which approximate most closely to the classic Welsh 'rhos pastures', cattle help to limit the spread of invasive willow and alder. This stops the land from drying out and provides a refuge for wet loving species such as purple moor-grass, marsh cinquefoil, lesser spearwort, gypsywort, wild angelica, common valerian and marsh willowherb.

Sheep grazing

There are several well drained pastures in the centre of the farm estate where sheep grazing is doing a very good job. For most of the year these fields look green and uninteresting but come the autumn, a rich variety of waxcap fungi dot the meadows in their vivid colours of yellow, pink, orange, white, green and red. A 2007 survey, financed by the CCW Species Challenge Fund, and largely carried out by Debbie Evans, Dr Phil Jones and local volunteers, found at least 18 species of waxcap *Hygrocybe spp.* on one outstanding hillside. Nestled amongst them are the more muted colours of the crazed caps *Dermoloma spp.*, pink gills *Entoloma spp.* and earthtongues *Geoglossum spp.*, contrasting with the more brightly coloured stems of club-shaped fungi *Clavaria spp.* The presence of these fungi is a strong indicator of long-term non-intensive farming practices. Sheep grazing is essential to their continued presence as they do not like competition at their fruiting time from long grasses. Heavy-footed, poaching cattle are kept away.

Staying healthy

Grazing sheep on wet areas causes problems other than their preference for herbaceous plants. These are good breeding grounds for water snail *Limnaea truncatula* which multiplies and spreads liver fluke, fatal to all sheep. Fluke also affects cattle but they appear to be better able to cope with low levels of infection. Foot infections in sheep are also associated with wet soils, leading to welfare problems of lameness and continuous foot rot. To help reduce these problems we restrict sheep grazing to the drier well-drained hill tops and sides. Now, in an attempt to mitigate future sheep health problems in such a wet climate, we have decided to try a local rare breed, the Llanwenog, which should be better adapted to local conditions. Numbers will

National Trust

Greater butterfly orchid in flower-rich meadow

be low as the only real need for sheep grazing is to maintain the waxcap pastures.

On reflection

The eight years we have spent managing the grasslands by grazing and hay making have not been simple and we are learning the importance of the correct grazing mouths for particular situations. Needless to say we have had to learn quickly and be prepared to make mistakes. No one year is the same and with our low stocking rates we are often under-grazing in quick growing wet summers.

One thing we have definitely learned is that the care of wild flower meadows is a very active one - if left with no management they quickly deteriorate and become invaded with coarse weeds and scrub.

The future

We are turning our attention to what we can achieve with cattle grazing on some of the more agriculturally improved fields. It may take a long time to see results but we would like to create invertebrate havens of clumpy grassland with varying heights of grass cover whilst using mild poaching to supply areas suitable for seeds to root into.

What is certain is that we now need to monitor to make sure our management is correct and we are providing the right conditions for all these wonderful plants to thrive. This will be greatly helped by the recent recruitment of Dr. Natasha DeVere to the NBGW team. A conservation botanist, she will help to supervise detailed surveys of the grasslands to make sure that our management is increasing the diversity of wildflowers. As part of this she will create maps of all the grasslands showing the type of plant communities present, using the National Vegetation Classification system. This is a way of describing all of the different groups of plants present in an area. Surveys will be repeated regularly so that we can keep a close eye on changes within the plant communities.

Come and have a look

As part of the NBGW, the farm actively welcomes visitors. We want people to come and enjoy being in the Welsh countryside and to appreciate the features that make it so special. We want to help our visitors to

learn about the Welsh native flora, the habitats that sustain them and their impact on other biodiversity. From this we want to encourage visitors to help to conserve the Welsh flora in an informed, responsible way.

For the past two years, fingerpost signage, a kissing gate and mown paths have allowed visitors to walk through our most established hay meadow. As this route also passes through a patch of woodland and a hedge lined lane, we've called it the 'Welsh Country Walk'. But in 2008 we are planning to open up the whole farm estate area. There will be clearly waymarked choices of footpath, well interpreted information points and trail leaflets.

We also have an ambition to convert one of the derelict smallholder farms into an interpretation / education centre, where the next generation of naturalists and conservationists can come and learn about organic farming for wildlife. By then, we would have learnt so much more.

Visiting information

Access to the organic farm is through the Botanic Gardens. Open every day except Christmas Day, opening hours are 10-6 during the summer, 10-5 during the winter. Check our website: **www.gardenofwales.org** for up-to-date admission prices. The National Botanic Garden of Wales is situated 10 mins from the M4 and ¼ mile from the A48 in Carmarthenshire, South West Wales, midway between Cross Hands and Carmarthen.

__Tim Bevan__ manages the National Botanic Garden farm estate, and __Bruce Langridge__ is the Garden's Interpretation Officer.

James Robertson

Waxcaps

Amaethu mewn Gardd

Bu'n stâd, yn barcdir, ac yna'n saith daliad fferm a thrwy'r cyfan llwyddodd glaswelltiroedd Gardd Fotaneg Genedlaethol Cymru i gynnal planhigion a chynefinoedd sydd bellach yn brin yn ein cefn gwlad. Dros yr wyth mlynedd ddiwethaf, a gyda chyngor arbenigwyr ar gynefinoedd a rhywogaethau, aed ati i reoli a gwella cyflwr y tiroedd hyn ar gyfer bywyd gwyllt.

Nid oes unrhyw gemegolion yn cael eu rhoi ar y tir. Dewiswyd dau gae sylweddol i fod yn weirgloddiau ac ar ôl sefydlu patrwm o gynaeafu ar ddiwedd Gorffennaf a phori yn y gwanwyn a'r hydref, mae'r llystyfiant yn datblygu i fod yn fwy amrywiol. Gwelir blodau nodweddiadol fel y bengaled, cribau San Ffraid a thamaid y cythraul ynghyd â rhai mwy anghyffredin fel tegeirianau llydanwyrdd. Mae planhigion fel erwain a physen y ceirw mawr yn tyfu yn y mannau gwlyb. Caiff patshyn gwahanol o wair ei gadw'n hir bob blwyddyn ar gyfer mamaliaid a thrychfilod.

Ar laswelltiroedd llaith eraill mae gwartheg yn helpu gwanhau'r frwynen babwyr ac atal llecaeniad gwern a helyg. Drwy sathru'r tir maen nhw hefyd yn creu cyflyrau delfrydol ar gyfer y garw droellennog - blodyn Sir Gaerfyrddin. Mae defaid yn ddefnyddiol yn y caeau lle mae'r capiau cwyr yn tyfu gan mai tywarchen fer sydd angen ar y ffyngau hyn. Bwriedir cadw defaid Llanwenog i'r diben hwn, oherwydd eu bod nhw'n debygol o ymdopi'n well gyda chyflyrau a allai droi'n gynyddol ac yn gyffredinol yn fwy gwlyb dros y blynyddoedd nesaf.

Mae rheoli'r tir yn dal i fod yn broses o ddysgu ac mae monitro'n hanfodol os am lwyddo. Y gobaith hefyd yw rhoi cyfle i ymwelwyr ddysgu am yr hyn sy'n digwydd fel y gallant hwy yn eu tro helpu gwarchod bywyd gwyllt Cymru.

Kate Williamson

Y Beili Brwdfrydig

Cynefin llygoden bengron y dŵr, Afon Dwyryd
Water vole habitat, Afon Dwyryd

Mae diddordeb SARAH JONES yn yr amgylchedd yn dyddio nôl i'w phlentyndod ar fferm yng ngogledd Cymru. Cafodd ei hysbrydoli gan brofiadau byd natur yn agos at adre' ac ymhellach i ffwrdd. Ond yma yng Nghymru y mae hi wedi dewis aros ac yn yr erthygl hon mae'n disgrifio'i swydd ar hyn o bryd ac yn rhannu ei brwdfrydedd am weithio ym myd cadwraeth.

Trafaeliais y byd, ei led a'i hyd - a dod yn ôl i fod yn Feili afon gydag Asiantaeth yr Amgylchedd yng Nghymru!

Feddyliais i erioed mai dyma beth fyddwn i yn ei wneud - yn wir, faswn i ddim wedi gwybod, pan oeddwn i yn yr ysgol, beth yn union oedd gwaith beili afon. Ond petawn i heb wrando ar fy mam yn fy siarsio i a'm brawd i gofio ein trwyddedau genweirio pan oedden ni'n mynd allan i bysgota mae'n bosib y byddwn i wedi dysgu yn llawer cynt!

'Swyddog Troseddu Amgylcheddol' yw teitl llawn fy swydd a bellach rwyf wedi bod yn ymhél â'r gwaith hwn ers pedair blynedd. Fy mhrif ddyletswyddau yw gwarchod ein hafonydd rhag effaith niweidiol pysgotwyr a rhai sy'n llygru dyfroedd Cymru. Yn y gorffennol - ac ymhell cyn fy amser i - ystyriwyd bod gan unrhyw un yr hawl i ddefnyddio pa bynnag ddull y mynnai i gymryd eogiaid a brithyllod o'r dŵr i fwydo'i deulu. Mae poblogaethau'r pysgod mudol hyn wedi lleihau'n ddirfawr erbyn hyn ac mae llawer llai o'r potsieriaid 'traddodiadol' ar hyd y lle. Ychydig o bobl sy'n dwyn pysgod heddiw i fwydo'u teuluoedd,

David Hatcher

Afon Dyfrdwy ac Afon Alun yn cyfarfod â'i gilydd • Convergence of the rivers Dee and Alun

ond bellach mae gangiau o ddrwgweithredwyr trefnus o gwmpas y lle sydd â'u bryd ar ddal eogiaid a brithyll afon i wneud elw mawr.

Yn aml nid yw pobl yn sylweddoli pa rymoedd sydd gan Feilïaid Asiantaeth yr Amgylchedd. Mewn gwirionedd, mae gennym ni holl hawliau swyddog Heddlu. O dan Ddeddf Pysgodfeydd Eogiaid a Dŵr Croyw 1975, 'rydym yn gwnstabliaid a gallwn arestio a dal y rhai y tybiwn eu bod yn pysgota'n anghyfreithlon. Byddwn yn rheolaidd, fel rhan o'n gwaith, yn treulio nosweithiau hir yn cuddio mewn llwyni a gwrychoedd, gan ddisgwyl i botsiar gyrraedd a dechrau chwilio am bysgod. Mae dillad cuddliw yn hanfodol i'm gwaith weithiau, yn ogystal â theles-gopau sy'n caniatáu i ni weld gyda'r nos, gwasgodau gwrth-drywanu, ffyn a gefynnau - yn union yr un fath â heddweision.

Yma yng Ngogledd Cymru 'rydym yn dîm o saith beili, yn gwarchod yr holl ardal o Fôn i Ddyfi a draw at y Ddyfrdwy. Dibynnwn lawer ar y wybodaeth a gawn gan enweirwyr lleol ac aelodau'r cyhoedd; heb eu cymorth hwy byddai'n gwaith yn llawer anoddach, os nad yn amhosibl. Mae'r wybodaeth allweddol hon yn caniatáu i ni ganolbwyntio ein hymdrechion lle bo'u hangen nhw fwyaf.

Weithiau caf wneud gwaith gwahanol, gan gynorthwyo adain gwastraff y Tîm Troseddu. Gweithiaf yn aml â swyddogion Cyllid a Thollau Ei Mawrhydi ym Mhorthladd Caergybi, gan gadw golwg ar faint o wastraff anghyfre-ithlon a fewnforir i Gymru.

Nid peth diweddar yw'r diddordeb sydd gen i yn yr amgylchedd. Bu Ted Breese Jones, y naturiaethwr enwog, yn ddylanwad mawr arnaf ; y fo oedd yn gyfrifol am fy nghyflwyno i'r tylluanod gwynion ar y fferm gartref a hyd heddiw dwi'n dal i gadw golwg ar yr aderyn godidog hwn. Cefais anogaeth hefyd gan filfeddyg lleol yn Nolgellau, sef Mike Dallimore, a ddysgodd i mi sut i ofalu am adar ysglyfaethus clwyfedig neu sâl. 'Dwi'n dal i fod yn falch o allu cynnig cymorth i filfeddygon lleol i ddelio gydag adar ysglyfaethus sy'n dod i'w gofal.

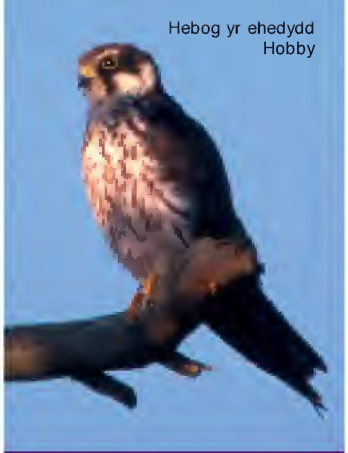
Bu profiadau gwaith, ar ôl gadael coleg yn sbardun pellach. Bûm yn warden tymhorol ar Lyn Tegid gyda Pharc Cenedlaethol Eryri am gyfnod, a chael cyfle i gynorthwyo gyda gwaith arolwg ar rywogaethau fel llygoden bengron y dŵr a'r dyfrgi. Dysgais lawer am y creadur olaf hwn drwy ymaelodi â Phartneriaeth Dyfrgwn Dwyryd a'r Grŵp Llywio ar Ffyrdd a Dyfrgwn. Gweld dyfrgwn yn gelain ar ochr y lôn y byddwn i yn amlach na heb, a fy ngwaith oedd codi'r cyrff a'u gyrru at Brifysgol Caerdydd ar gyfer archwiliad *post mortem*, er mwyn canfod lefel y llygredd ynddynt. Roedd hyn yn allweddol gan mai llygredd fu'n gyfrifol am achosi'r lleihad trychinebus yn niferoedd dyfrgwn yn y gorffennol.

Mae poblogaeth y dyfrgwn yng ngogledd Cymru ar gynnydd bellach, ond rwy'n dal i ymddiddori ynddynt a chymryd rhan yn y gwaith o'u gwarchod. Rydym yn canfod mwy o genawon amddifad sydd angen gofal ac yn ystod y flwyddyn neu ddwy ddiwethaf cefais y pleser o achub nifer o ddyfrgwn amddifad, clwyfedig neu sâl. Dwi ddim am godi

gwrychyn fy nghyd-enweirwyr, ond wir i chi, mae dyfrgwn ifanc yn ddel ac **weithiau'n** annwyl, ac wrth gwrs does dim gwadu bod dyfrgwn yn arwydd o afon iach. Pan fyddaf yn derbyn dyfrgi, y peth cyntaf y byddaf yn ei wneud yw ei fwydo - ond gyda physgod o archfarchnad yn hytrach nag o'r afon agosaf, er mwyn gwarchod y stociau lleol o bysgod! Os yw'n iach, caiff ei gasglu gan swyddog lleol y Gymdeithas Frenhinol Er Gwarchod Anifeiliaid a'i gludo i ganolfan yn y New Forest. Ni chaiff ei ryddhau hyd nes y bydd wedi ymgryfhau yn llwyr, ac wedyn bydd yn cael ei ollwng yn y fan lle'i cafwyd. Dyma'r adeg pan nad yw dyfrgi yn ddel nac yn annwyl o gwbl, na chwaith yn hawdd ei reoli! Lawer gwaith bu bron i mi gael fy mrathu a'm crafu gan ddyfrgi a oedd yn frwd iawn i ddychwelyd i'w gynefin!

Braf yw gweithio ym myd cadwraeth yn agos at adref, ond f'aswn i ddim am y byd wedi colli'r profiad o deithio i wledydd eraill i weld peth o'r bywyd gwyllt mewn mannau eraill, a rhannu'r profiad hwnnw gyda phobl eraill drwy gyfrwng rhaglenni teledu ar S4C. Bûm yn ddigon ffodus i dreulio pythefnos ar gwrs yn Moholoholo yn rhanbarth gogleddol De Affrica yn dysgu sut i fod yn geidwad gwahanol helfilod fel llewod, llewpardiaid ac amryw o adar ysglyfaethus - a chael fy ffilmio yn gwneud. Arweiniodd hyn at gyfleoedd eraill ym myd y teledu i deithio i leoedd fel Sri Lanka, Mecsico, a'r Arctig a gwneud llu o wahanol bethau – fel marchogaeth estrys, ail-leoli anifeiliaid gwyllt, dilyn trywydd llewpardiaid, gweld eliffantod amddifad, plymio ar greigres gwrel a rhyddhau crwbanod môr gwyrdd yn ôl i'r gwyllt. Dygais lawer am waith mudiadau eraill fel Ymddiriedolaeth 'Born Free' a 'Global Vision International' sydd oll yn gweithio mor ddygn i ddysgu pobl am warchod cynefinoedd a rhywogaethau bregus a hefyd yn gwneud gwaith ymarferol ardderchog eu hunain. Mae'r atgofion yn wefreiddiol - o gyfoeth y cynefin tanfor yn nyfroedd cynnes Mecsico i'r daith dros dwndra rhewllyd yr Arctig mewn hofrennydd lle gallwn weld pa mor erwin yw cynefin yr eirth gwynion rhyfeddol sy'n wynebu dyfodol mor ansicr bellach yn wyneb y newidiadau yn yr hinsawdd.

Ond 'does unman yn debyg i gartref. A bellach dwi'n mwynhau ein hamgylchedd ardderchog ni yma yng Nghymru. Does dim yn well na cherdded ar hyd glan afon a gweld y bywyd gwyllt amrywiol sy'n byw o'n cwmpas fan hyn. Un o brofiadau gorau'r flwyddyn i mi yw gweld eog enfawr, sydd wedi nofio milltiroedd lawer ar gefnfor agored, wedi teithio ar hyd aber ac wedyn wedi dilyn afon er mwyn silio yn nentydd mân y bryniau. Pan fydda i'n gweld golygfeydd o'r fath, hawdd yw anghofio'r nosweithiau hir ac oer o ddisgwyl potsieriaid!



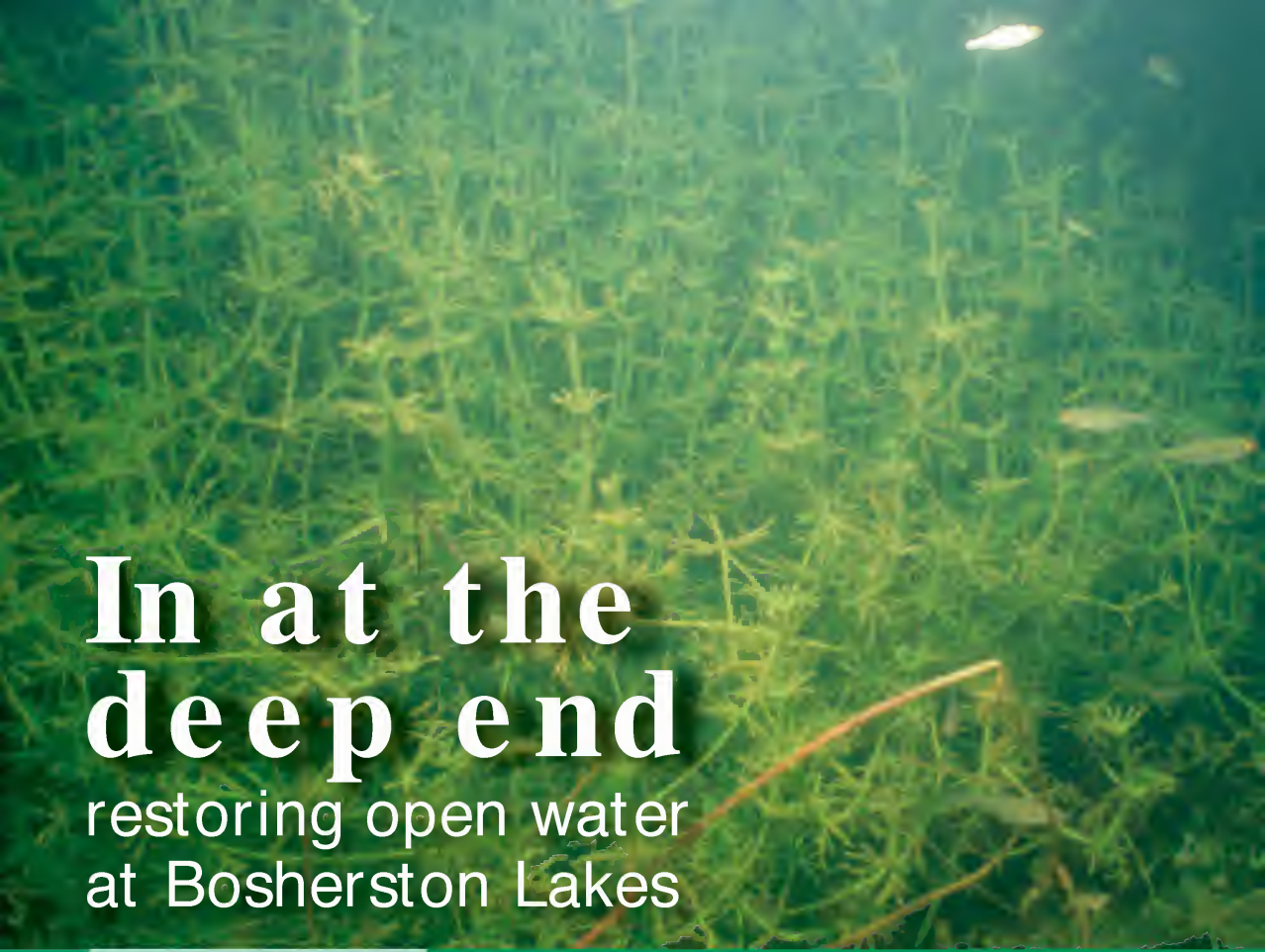
Hebog yr ehedydd
Hobby

John Robinson

The Water-watcher

Poachers aren't what they used to be. No longer is it a case of 'one for the pot', but of 'lots for profit'. Today's river bailiffs need to keep a careful look out for organised gangs of environmental criminals, and often have to spend long uncomfortable nights staked out on river banks. Few people realise perhaps that river bailiffs have the same powers of arrest as police officers, and the equipment they carry is virtually identical.

Sarah Jones' lifelong passion for wildlife has taken her from her home in Gwynedd to places as far flung as South Africa, Mexico and the Arctic. She has witnessed natural wildlife spectacles and enjoyed sharing them with others through the medium of television programmes. But her home environment is second to none; her involvement with local initiatives brings her into close contact with wild creatures such as otters and birds of prey and her work allows her to witness the excitement of our own wildlife wonders, such as the return of an adult salmon to its spawning ground each year.



In at the deep end

restoring open water at Bosherston Lakes

Chara and roach shoal

Sometimes drastic action is called for to re-start the processes of natural succession and save a much-loved and valuable landscape. The upper reach of Bosherston lakes western arm was in-filling, and becoming a swamp; could a huge problem be turned into a valuable resource for local farmers? ***BOB HAYCOCK*** *and* ***IAN BENNETT*** *decided to try to restore the area, and lived to tell the tale.*

Bosherston Lakes (or Lily Ponds as they are commonly referred to) are a series of man-made lakes at the heart of the National Trust's Stackpole Estate in south Pembrokeshire. They extend over an area of approximately 30 hectares within the Stackpole National Nature Reserve, managed by the National Trust (NT) in partnership with the Countryside Council for Wales (CCW). Created principally as a landscape feature, the lakes now support nature conservation features of European importance, including otters and aquatic vegetation, notably the well-known water lilies and large beds of stonewort *Chara hispida* (an uncommon plant in Wales).

The lakes lie in a system of three wooded valleys extending inland into a limestone plateau from the beach at Broad Haven South. From the end of the last Ice Age until the mid-eighteenth century these valleys contained spring-fed streams, fringed by swamp and woodland, flowing into a tidal creek bordered by salt marsh and dunes. The Campbells of Cawdor, who owned the estate from 1689 to 1976, created the lakes with a series of dams between approximately 1760 and 1840.

All images: Bob Haycock

Bosherston Lakes and western arm

Today, the lakes are a popular visitor destination. The area is visited by more than a third of a million people per year. The majority use a network of footpaths around the shoreline connected to nearby car parks. The lakes are also a popular coarse fishing attraction during the fishing season.

Lake water levels were originally controlled by an elaborate system of valves and sluices, which may have enabled sections of the lake to be de-silted at intervals. This system fell into neglect and disuse during the early twentieth century, and had altogether ceased to function by the time the National Trust took over in 1976. As a result, parts of the lake system have been gradually infilling over the years, through natural sedimentary processes from rotting lake vegetation. This is exacerbated by stream-fed silt, flowing into the lake during periods of heavy rainfall. Much of this is due to soil erosion from steep-sided valleys and adjacent farmland, where the limestone borders a ridge of old red sandstone at the head of the Lakes Eastern Arm. The effects of this are especially evident at the heads of the valleys where open water is gradually being replaced by expanding swamp and woodland.

Maintaining an open water landscape - the challenge

The lakes have been extensively studied over the last 30 years, including bathymetric surveys, measurements of hydrology and water chemistry and changes in vegetation. From such work we know that the lakes are becoming increasingly shallow leading to a decline in nature conservation and landscape interests.

By 2006, a one-hectare pool (at the top of the Lakes Western Arm, below Bosherston village) previously supporting attractive water lilies, was quickly developing into swamp. This area, crossed by a narrow causeway, is one of the first places people come into contact with the lakes' wildlife and scenic interests. Local people and visitors to the area were becoming concerned about lake levels and the degree of sedimentation in this area. Because of its importance, in both landscape and conservation terms, it was realised that something had to be done.

There were basically only two options to consider - leave alone allowing natural processes to continue, or remove (by an appropriate method) a large volume of sediment, which had been accumulating over some

Chara hispida bed, western arm of Bosherston Lakes, August 2005

150 years or more. Because of the area's importance as an open water feature, the decision was made to restore it and its associated nature conservation interests. Removal was going to be a major task, requiring considerable resources and planning, a project that would take almost two years to complete.

Formulating the plan

We had previously observed suction dredging of silt during the restoration of Barton Broad in Norfolk, so it seemed useful to consider a similar approach. A suction-pumping demonstration was organised on one of five silt-trap pools upstream of the lake system. We quickly realised that sucking out the sediment would not only be fairly time-consuming, but would require a large area of land to hold necessary settlement lagoons. The steep topography of the area posed severe limitations.

It was clear that the most appropriate and cost-effective option would be to mechanically dig out the sediment. A similar method had been employed a decade ago to de-silt a smaller pool at the head of the Bosherston Lakes Eastern Arm. This would be a messy operation, but if done at the driest time of the year in the autumn, we hoped to minimise potential impact to wildlife and visitors.

The next stage was to meet contractors on site, to make sure that proposed methods would be achievable and within a projected budget limit. Before the plan could be finalised, we were very aware of a duty to inform local residents of the project and how it could possibly affect them, and explore the hoped for benefits.

It was helpful at this time that the NT appointed a Community Liaison Officer. Meetings were set up at the local pub in Bosherston to outline the plans, involving the Area Warden. The response was very encouraging. We promised to provide regular progress reports. This was done through strategically placed notices, leaflets delivered to individual households, and press releases.

Where would we put the stuff?

We obviously needed a disposal site. The Trust's land holding in the area was not well suited to take much

Keeping visitors informed about progress

of it. Simon Davies, a tenant farmer closest to the site was contacted. He was extremely receptive, provided his landlord approved. This being the case, two field options were offered - one, immediately above the lakes, the other some 800 metres away. We opted for the latter - not only was it slightly larger, but there would be minimal risk of run-off into the lake. This area of land was on fairly shallow soil, the fertility of which could hopefully be improved through a topping of rich, organic lake sediment.

By spring in 2006 we had a working method, the approval of local people, and had identified suitable land to deposit the sediment but we still had a number of things to do. Most importantly, this included obtaining Environment Agency consent and SSSI approval from CCW. We also had to ensure that important geological and archaeological features would not be damaged.

Local Environment Agency (EA) staff were extremely helpful, guiding us through quite a lengthy process towards achieving consent. Samples of sediment had to be analysed, to make sure there were no contaminants. Similarly, soil samples from the potential receptor field had to be analysed to determine compatibility of soil type with the organic sediment. Following receipt of chemical analytical reports, an independent agronomist then had to interpret the results, and produce a Certificate of Agricultural Benefit, plus a Pollution Risk Assessment. Armed with all the necessary reports, it was now possible to submit to the EA form WMX7 (notification of an exempt activity) land treatment for agricultural benefit or ecological improvement. It took several weeks to get the required information together but approval was finally given.

To reach the receptor field, dumpers would have to transport the sediment some 200 metres along a narrow country road on the edge of Bosherston village. So, consultation with Pembrokeshire County Council Highways Authority was necessary for advice on managing spillage, traffic management, the level of road-sweeping needed and so on.

At last the work commences

The preliminaries took approximately 4-5 months to complete, but on 16th October a large tracked excavator and five dumper trucks arrived on site and the work commenced. Loads of very wet sediment (estimated to be 60-70% water) slowly made their way up a steep, narrow track, across a field and along the road into the receptor field 800 metres away. Even though we were experiencing a dry spell of weather, water depth was higher than anticipated. It was quickly realised that the machinery could not travel very far into the lake. Crunch time! If we were

The start of the de-silting project

to continue, a lakeside access track would have to be created so that dumper trucks unable to drive down the lakebed could be loaded. In addition, a large pump was installed to lower the water level. This was kept going for 24 hours a day during the duration of the work. Without these modifications, we would have had to abandon the project.

Over the next eight days the work proceeded well; and then the rains came. Conditions deteriorated and access to the receptor field became impossible. The EA were again consulted and approval was given to temporarily store sediment to allow it to dry out on an alternative area of land, in NT ownership, closer to the site but further up the valley. A bund was created to prevent run-off. When dry, this material would be spread in an approved field location the following year.

After a further two weeks even this area was close to capacity. By now lake levels were rising as winter rains set in, so we had to stop work until the following year. By November 2006, we estimated that more than 9000 cubic metres of lake sediment had been removed.

Work recommenced in autumn 2007. First we had to remove a deep layer of now dried rich, dark sediment from the valley upstream. Having been very pleased with the material provided in 2006, Simon Davies was happy to use the stored material - offering an area of set-aside land, which was to be ploughed soon. More soil-tests followed; by now we were pretty conversant with the procedures! Dried sediment was much easier to handle and dispose of. At first it was spread by large tractor-pulled muck-spreaders, though it proved more efficient to spread by excavator. Having successfully spread all the dried material, excavation of the remaining *in situ* sediment continued, along similar lines to 2006, filling the valley bottom again. The operation was refined through installation of two large pumps to lower the water levels. The contractor provided larger capacity trailers with big, low ground-pressure tyres. This allowed further access into the water, and the remaining sediment was removed over the next three weeks, well within time and budget.

What have we learned?

We considerably underestimated the volume of sediment in the lake, and the area required to dispose of it. We calculate that around 15,000 cubic metres of material was removed. This has been replaced by an equivalent amount of water, which should help retain the overall lake water levels in summer.

Working on a lakebed of unknown and irregular topography was certainly challenging. We identified a natural deep band of clay, half way down, as well as a few previously unknown springs.

Lake levels were quickly restored. Over the last year or so, lake flora and fauna have started to recover, although it may be a few more years before water lilies become re-established.

Communication with the local community at every

Water lily flower

stage of the project was critical to its success. Visitors to the area and the local community have expressed their appreciation of the work done and can see the benefits.

Clearly, major intervention of this kind is not only costly and subjective, but if we are to maintain the lakes (in themselves a man-made landscape) as an important visitor attraction and for their nature conservation values, large-scale works are some times needed. The total cost of all the work, including disposal, analyses, consents, and the agronomist's report was £56,000 (an average of £3.75 per cubic metre).

The project helped raise the profile of bigger issues affecting the lakes' future, such as water-loss, impacts of modern farming practices in the catchment and possible impacts of climate change. Above all it provided a good example of a multi-agency partnership approach and the benefit of working with local farmers to recycle natural organic materials. The benefit to the farmland has been recognised by other members of the farming community, some of whom have expressed an interest in being involved with similar future work.

__Bob Haycock__ is CCW's Senior Reserves Manager, Stackpole NNR and __Ian Bennett__ is NT's Area Warden, South Pembrokeshire.

Troi'r cloc yn ôl

Nôl yn y 18-19fed G y crëwyd llynnoedd Bosherston, yn ne Sir Benfro a hynny drwy godi cyfres o argaeau ar draws nentydd mewn tri chwm coediog y tu ôl i draeth Broad Haven.

Mae'r llynnoedd 30 hectar hyn yn hynod o boblogaidd, a hefyd yn rhyngwladol bwysig oherwydd eu dyfrgwn a'u planhigion dyfrol. Ond mae'r dibbordeb yn dirywio oherwydd bod y llynnoedd wedi bod yn llenwi'n raddol dros y blynyddoedd gyda gweddillion planhigion a llifwaddod o dir fferm cyfagos.

Nid ar chwarae bach y penderfynwyd carthu'r llyn islaw pentref Bosherston, lle'r oedd y dŵr agored yn troi'n gors. Roedd rhaid ystyried pa ddull i'w ddefnyddio, cost ac amseriad y gwaith, yr effaith ar fywyd gwyllt, archeoleg ac ymwelwyr ac roedd angen llecyn diogel i wared gwerth 150 mlynedd (15,000 m³) o waddodion.

Er y cynllunio gofalus, cododd problemau annisgwyl. Er enghraifft, oherwydd dyfnder annisgwyl y dŵr bu rhaid defnyddio pwmp yn ddi-baid i ostwng y lefel cyn carthu. Roedd angen safle llawer mwy o faint na'r un a ddewiswyd i storio'r gwaddodion ac roedd glaw y gaeaf yn gymaint o rwystr nes bu rhaid hollti'r gwaith dros ddwy flynedd.

Dysgwyd gwersi pwysig, yn enwedig pa mor allweddol yw hi i gyfathrebu'n gyson gyda'r gymuned leol. Mae'r prosiect wedi bod o fudd i'r bywyd gwyllt ond llwyddodd hefyd i godi ymwybyddiaeth o bynciau ehangach ynghlwm wrth amaethu mewn dalgylch dŵr ac o newid hinsawdd. Bu'n gymorth hefyd i wella cydweithrediad gyda ffermwyr lleol sydd bellach yn gweld manteision mewn ailgylchu deunydd organaidd i wella cyflwr pridd.

Cymru a'r byd

Natur Drefol

Cymru drefol ac ôl-ddiwydiannol yw lle mae'r mwyafrif ohonom ni yn byw. Ambell waith neilltuwyd y ffaith hon gan gadwraethwyr, nid ydynt wastad yn gwerthfawrogi cyfoethogrwydd y bywyd gwyllt yn yr ardaloedd trefol, ac yn arbennig yr hyn mae'n ei olygu i bobl. Yn gynharach eleni trefnwyd cynhadledd gan NATUR (Sefydliad Rheolaeth Cefn Gwlad a Chadwraeth Cymru) i amlygu cyfoethogrwydd yr amgylchedd trefol, ac i gael golwg ar y cysylltiadau rhwng pobl a natur yng Nghymru drefol.

Ymhlith y siaradwyr roedd Mathew Frith o'r 'Peabody Trust'. Atgoffodd Mathew ni fod dealltwriaeth pobl o fioamrywiaeth byd-eang yn rhagori ar eu dealltwriaeth o'r hyn sydd ar garreg eu drws; dadleuodd y dylai'r amgylchedd naturiol fod wrth galon cynllunio trefol. Bu Kevin Peberdy o'r 'Wildfowl & Wetlands Trust' yn sôn am y potensial sydd i weld gwellhad mewn bioamrywiaeth o fewn amgylcheddau trefol. Gall adferiad gwlypdiroedd mewn ardaloedd trefol chwarae rhan allweddol yn ail-gysylltu pobl gyda bywyd gwyllt drwy ddod â natur yn nes atynt.

Ni ddylid anghofio fod posib i gyfran helaeth o bobl fod yn anymwybodol o fywyd gwyllt trefol ac y dylem ni fel cadwraethwyr fod yn gwneud mwy i geisio darganfod ffyrdd o alluogi pobl i gymryd diddordeb yn yr hyn sydd o'u cwmpas. Cafwyd enghreifftiau gwych o hyn gan Dave Horton gyda Chymunedau'n Gyntaf a'r prosiect 'Dewch Allan' a Nia Adamson gyda 'Mapio Gwyrdd'. I fod yn llwyddiannus, mae angen sgiliau cyfathrebu ar gadwraethwyr, yn enwedig brwdfrydedd, arloesiad, anogaeth a dealltwriaeth o anghenion cymdeithasol.

Ble bynnag fo pobl, ni fyddent o angenrheidrwydd yn gweld natur tan eu bod yn y mynyddoedd; ym mhob man arall dim ond 'pethau' sydd yno ydyw.

Mae angen sgiliau penodol i weld pethau fel y gwêl eraill hwy, yn hytrach na thybio mai dyna sy'n bwysig i Gymru neu beth sydd angen cael ei wneud ymhle. Gall fod rhesymau ansawdd bywyd a chynhwysiad cymdeithasol llesol i gael pobl i feddwl am eu byd naturiol. Rydym ni yn gwybod am bwysigrwydd natur, ond ni allwn wneud i bobl deimlo'r un fath; cyrraedd yma'n 'naturiol' wnaethom ni felly mae angen i ni greu cyfleoedd i eraill yn yr ardaloedd hyn wneud yr un fath. Bydd y dull yma yn amlygu sialensiau a bydd angen sgiliau creadigol, hyblyg a rheolaeth prosiect arloesol.

Gorfodir ni gan y diffiniad i feddwl a dychmygu'r tirwedd tu hwnt i gadwraeth natur; golyga trefol bobl ac ôl-ddiwydiannol yr arwyddion o'r hyn yr arferem ei wneud. Ymateb i hyn yn y ffordd orau posib mae natur ddarparu a chynnal gweithlu proffesiynol medrus ar gyfer Cymru.

Mae **NATUR** yn sefydliad newydd sy'n bodoli er budd gweithwyr proffesiynol ym maes rheolaeth cefn gwlad a chadwraeth yng Nghymru. Prif amcan NATUR yw cyfrannu at

Am fwy o wybodaeth cysylltwch gyda'r Swyddog Datblygu neu gweler y wefan **www.natur.eu.com**
Gwenno Griffith,
Ffôn: **01766 510 132**,
gwenno.griffiths@nationaltrust.org.uk

DIGWYDDIADAU YN Y DYFODOL

Gwyliwch allan am rai o'r digwyddiadau sydd gan NATUR ar y gweill:

- **Hydref 2008:** Cynhadledd Morol & Arfordirol
- **Gwanwyn 2009:** Cynhadledd Diwylliant & Natur

Swyddfa NATUR:
Craflwyn, Beddgelert, Caernarfon, Gwynedd LL55 4NG

John Little

Wales and the world

Urban Nature

Urban and post-industrial Wales is where most of us live. Conservationists sometimes overlook that fact, and don't always appreciate the richness of wildlife in urban areas, and what this means to people. Earlier this year NATUR (The Welsh Institute of Countryside and Conservation Management) organised a conference to highlight the richness of the urban environment, and to explore the connections between people and nature in urban Wales.

Amongst the speakers was Mathew Frith from the Peabody Trust. Matthew brought home the message that most people have a greater understanding of global taxa than what's there on their doorsteps, and argued that the natural environment should be at the heart of urban design. Kevin Peberdy from the Wildfowl and Wetlands Trust gave an insight into the potential for biodiversity enhancements within urban environments. The restoration of wetlands in urban areas can play a big part in re-connecting people with wildlife and also make it more accessible to them.

We must not forget that a lot of people might be unaware of urban wildlife and that we as conservationists should be doing more to find ways of enabling people to take an interest in what's around them. Dave Horton gave some great examples of this with Communities First and the Come Outside project and Nia Adamson with Green Mapping. To be successful, conservationists need communications and people skills, especially enthusiasm, innovation, encouragement and an understanding of social needs.

Wherever people are, they don't necessarily recognise any nature until they're in a reserve or in the hills; everywhere else it's just 'stuff' that's there.

A distinctive set of skills is needed to see things as others see them, rather than relying on pre-conceived notions of what's important to Wales or what needs to be done where. There might be very good quality of life and social inclusion reasons to get people thinking about their natural world. We know how important nature is, but we cannot make others feel the same; we've come to it 'naturally' so we need to provide the means for people in these areas to do likewise. And this 'uncontained' approach will throw up its own challenges, so skills in creative, flexible and innovative project management are needed.

The definition forces us to think and imagine the landscape beyond just nature conservation; urban means people and post-industrial means signs of what we used to do. Nature just responds to this as best it can.

NATUR is the new Institute that exists for professional workers in the countryside and conservation management field in Wales. NATUR's main aim is to contribute towards and maintain a highly skilled professional workforce for Wales.

For more information contact the Development Officer or see the website **www.natur.eu.com**
Gwenno Griffith,
Phone: **01766 510 132**
gwenno.griffith@nationaltrust.org.uk

FUTURE EVENTS

Look out for other events that NATUR will be organising:

- **Autumn 2008:** Marine & Coastal Conference
- **Spring 2009:** Culture & Nature Conference

NATUR Office:
Craflwyn, Beddgelert,
Caernarfon,
Gwynedd
LL55 4NG

Green **Bookshelf** • **Silff Lyfrau** Amgylcheddol

SEDGES OF THE BRITISH ISLES
AC Jermy, DA Simpson, MJY Foley & MS Porter
BSBI London, 2007

The first volume of BSBI Handbooks on difficult groups of plants appeared in 1968. Its purpose was to aid the identification of sedges, and its approach was experimental. The experiment was well received, getting the series off to a cracking start.

I now have three editions of this first handbook on my shelves. That first volume, my favourite, fits easily into the pocket, runs to two hundred pages and covers 69 species. It has been out on numerous field trips to nice places, which is where you find sedges.

That is why you want to become acquainted with them. There is something satisfying about knowing your sedges; they tell you much the habitat you are in. They are not all difficult, either. Pendulous sedge *Carex pendula* grows in my garden as a weed. You can't miss this jumbo-sized sedge, finger-length tassel spikes reaching chest height and hanging heavy with seeds which once formed part of the diet of early settlers in these islands. The handbook helps with the more critical species.

The second volume added 68 pages, or 34%, and 4 species, had a glossy cover and a spine which has faded in the sun, but does the job it set out to do very well. Now we come to the current edition. It looks exactly like its predecessors, same title, same cover, but this time we have a 600-page volume, which is far from handy. By including non-sedges in the cyperaceae, like cotton-grasses and spike-rushes, it manages to extend the list to 106 species, and throws in 50 hybrids for good measure. That's inflation.

Size isn't everything – indeed more is often less. I don't think this volume will do nearly such a good job at encouraging the timid to get stuck into sedges, and I'm not sure it really is a handbook any more. Its focus is narrow, but its detail huge - this is a general trend I have watched in nature conservation with anxiety. However in its technical detail and the quality of its editing it is masterly, and there will be an audience out there which will welcome and make good use of it. Before embarking on a fourth edition, I hope BSBI tries a new 'experimental approach'; and perhaps there's room for a non-technical book about sedges, lest we forget what nice plants they are.

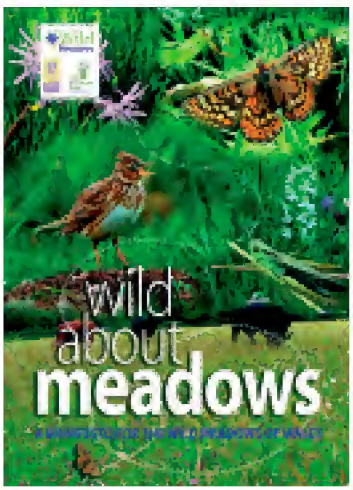
James Robertson

A BOOST FOR WILD MEADOWS!

Wild meadows, colourful grasslands full of wild flowers and insects, provide a fundamental life-support system for birds and other wild animals. They are among Britain's most threatened wildlife habitats, and now occupy less than 3.3% of the Welsh countryside. These meadows are a source of great beauty and abundant wildlife, with untapped potential for economic and agricultural benefits.

A new document written by Flora Locale and the Grasslands Trust – *A Manifesto for the Wild Meadows of Wales* - was published on 21st April, to alert the Welsh Assembly Government, farmers, landowners, local authorities and conservation groups to this grave situation. The campaign is led by television presenter and patron of *The Wild Meadows Initiative for Wales*, Iolo Williams. The purpose of the Manifesto is to develop an agenda for meadow conservation, which all those who care about Wild Meadows can unite behind.

The *Manifesto for Meadows* is available to download online, in both Welsh and English, at **www.wildmeadows.org.uk / www.dolyddbyw.org.uk**. If you would like a hard copy, or more information about the Wild Meadows (Wales) Initiative then please contact: Ivy Berkshire **wildmeadows.ivy@googlemail.com** Tel: **07912 789003**.



Islands round-up

2007 News from Skomer & Skokholm

Staying, coming and going

The Skomer farm complex has been transformed into accommodation for 15 overnight visitors, 6-8 volunteers and sundry researchers. Skomer is famous for its approachable puffins, but nothing compares with experiencing an enormous Manx shearwater colony at night. If you want to stay as a visitor or volunteer, log on to **www.welshwildlife.org** or phone 01239 621600.

After nine successful years as Skomer Warden, Juan Brown has decamped with his family to Shetland. Jo Milborrow has moved from Skokholm to take up the Skomer post, with Chris Taylor looking after Skokholm. Assistant Warden Richard Brown has also moved... to Bardsey Bird & Field Observatory!

It's now the turn of the Skokholm buildings to be renovated, so there will be no residential stays for two years, until the work is completed. For details of five day-trips this year, log on or phone as above.

Most seabirds still doing well

Both islands report good breeding seasons. Breeding numbers on Skokholm were up for guillemots, lesser black-backed gulls and herring gulls, with other seabirds fairly stable. The puffin count on Skomer on 4th April was 11,821, the highest spring count on record. Great black-backed gulls, starved of rabbits after a 90% crash, took many guillemot and razorbill eggs and chicks, and even some adult guillemots. Nevertheless, these SW Wales colonies have not suffered the appalling nesting failures seen in many northern British colonies. Storm petrels on Skomer were predated by three species of owl – barn, little and short-eared!

Other visitors - from large to small

In September 2007 a dead leatherback turtle was spotted in North Haven on Skomer. This species of turtle, weighing in at half a ton or more, breeds on tropical beaches but moves north after breeding in pursuit of jellyfish. Two Remora sucker fish were still attached to the turtle. A few sunfish were seen around the same time.

Skomer now has a solar-generated 240 volt power supply, which allows use of a mercury-vapour moth trap without using a generator. Nine species were caught for the first time in 2007, including a death's head hawkmoth on September 10th; several 'Notable A' and 'B' species were also logged.

Notable birds on Skomer

Rarities included a short-toed lark in June, and the island's first Radde's warbler on October 17th.

This species is a relative of the willow warbler and chiffchaff, which breeds in Siberia and winters in Burma and Indo-China. So it was well and truly lost! Ravens, crossing to Skomer in search of fledging Manx shearwaters, peaked at 41 in August. Over 200 Canada geese in September created another unwelcome record.

Collated by Geoff Gibbs from information provided by the Wardens.

Emily Dicks

Emily Dicks

Mammals round-up

Records

A new project to produce a Mammal Atlas for South East Wales area (Gwent and Glamorgan) is underway and will operate along similar lines to the Snowdonia Mammal Atlas Project. The South Wales Mammal Partnership is the loose grouping of bodies which are supporting and developing the project. For further information please contact Adam Rowe at SEWBReC **02920 641110** or Gemma Bodé at Gwent Wildlife Trust **01600 740358**.

Polecats

A report just published by The Vincent Wildlife Trust confirms that the polecat's recovery in Britain is continuing; it is now widely re-established across Wales, the Midlands and central southern England. A new population estimate suggests that there are now 46,784 polecats in Britain. The findings of the survey will be the subject of an article in the Autumn edition of Natur Cymru. Copies of *The Polecat Survey of Britain 2004-2006: a report on the polecat's distribution, status and conservation* are available from the Trust at a price of £10 + p&p, tel. **01531 636441** or email **vwt@vwt.org.uk**

Dormice

North Wales Wildlife Trust is gaining a better understanding of the distribution of hazel dormice across north Wales, and increasing public awareness of dormice and the issues that affect them. The project builds on and complements the work being undertaken in Bont Uchel Wood near Ruthin by the North West Dormice Partnership. It involves placing and surveying 470 nest boxes in Conwy, Denbighshire, Flintshire and Wrexham, and surveying for dormice in Gwynedd and Anglesey. In the Chwiler Valley the population seems to be doing well, with dormice spreading throughout the woodlands, with records of three new sites surrounding Bont Uchel. The project is funded by CCW and MTUK, with support from Sharp UK. For more information contact Rhian Wyn Hughes, Dormouse Project Officer on **01352 810469** email: **RhianHughes@wildlifetrustswales.org**, or visit the NWWT website: **www.wildlifetrust.org.uk/northwales/dormouse.html**

Brecknock Wildlife Trust

Dormouse

North Wales Wildlife Trust

Freshwater

The recovery of the otter population in Wales is borne out by more sightings. In north Wales there have been recent sightings in Waunfawr and Penrhyndeudraeth. In February David Greasely had a fantastic view of an otter swimming across the river onto a stone embankment under the bridge at Waunfawr. Not too far away, one of the Snowdonia National Park's estate workers managed to get

some lovely film footage of an otter feeding in the business park pond next door to the Park offices.

Wildlife Trusts in Wales and partners have started working on the Welsh Beaver Assessment Initiative, which aims to investigate the feasibility of a beaver reintroduction to Wales. This work will continue throughout 2008 and involve liaison with all the key stakeholders, research into potential sites, management issues, and potential economic and social benefits to the rural economy. Site surveys are due to commence in June, with a report produced by October, and completion in January 2009. Further information can be found on the Beaver Information Exchange for Wales: **www.beaver info.org**. The Project Co-ordinator is Adrian Lloyd Jones of the North Wales Wildlife Trust: **01352 810469**, email: **acljones@wildlifetrustswales.org**.

Radnorshire Wildlife Trust has appointed their first ever Water Vole officer - Darylle Hardy. She had been working on a River Lugg project with Hereford WT, and is now working for RWT in the Marteg catchment. Darylle will be based at Gilfach and is hoping to visit as many sites as possible along the Afon Marteg as well as its tributaries, Marcheini Fawr and Fach and the Nant Tawelan. As well as determining whether there are still water voles within the catchment, Darylle will be devising a mink control programme and working with landowners to combat issues such as acid run-off and bank erosion. The project is funded by CCW Species Challenge Fund and EA and will last six months initially.

Bovine TB

The Wildlife Trusts acknowledge the magnitude of the bovine tuberculosis (bTB) problem in Wales and are committed to helping to find an effective solution based on sound scientific evidence, but believe that the proposed badger cull would not be practical or cost effective and could even be counter productive. Given the Krebs trial results and the fact that, in Northern Ireland, TB incidents were halved in just four years through better cattle testing, monitoring and enforcement, the Wildlife Trusts believe that the primary focus of efforts to control bTB should therefore be on cattle to cattle transfer. They support regular bTB testing of cattle (including wider use of more sensitive tests), increased biosecurity on farms, cattle vaccination and market-based compensation payments for diseased cattle.

Marine

In early December 2007 Cliff Benson of the Sea Trust S&W Wales first began to get reports of a humpback whale feeding in and around Swansea/Mumbles which were later confirmed by Sea Trust volunteer Steve Rosser and Gower Marine Mammal Group's Rob Colley. Cliff and Lyndon Lomax tried to photograph and film this incredible occurrence and were soon joined by a crowd of thrilled onlookers, as the whale put on a breathtaking display, often quite close to the shore. Sadly it was only seen briefly the following day and in mid December the sad news broke that it had died and been towed onto Aberavon Beach by the RNLI. Rod Penrose of Welsh Marine Strandings arranged for Dr Paul Jepson and his London Zoological Society team to perform a post mortem on the humpback. Cliff reports that it was really sad to see this impressive whale dead on the beach, especially as many had witnessed it alive and seemingly well only days before. It seems that it was a young male and may have been separated from its mother. Its blubber layer was quite thin and it may have died of starvation, although there were some signs that it had been involved in some kind of collision, though this may have been after it died.

Hares

The mid and west Wales brown hare survey (hosted by the Wildlife Trust of South and West Wales) continues to receive records, with 408 new records for Ceredigion, 94 for Montgomeryshire and nine for Pembrokeshire received so far. More are always welcome (especially for Pembrokeshire!) to **l.wilberforce@welshwildlife.org**

I have received a report of the sighting of a mountain hare on the Clwydian Range in north-east Wales. The viewer had seen mountain hares before, but not in north Wales, but her husband remembers seeing some when he was a child growing up in Denbighshire. Has anyone any more records?

And finally...

In March, Ben Stammers was witness to a fox narrowly failing to snaffle a little egret at Spinnies, Aberogwen nature reserve near Bangor..... it must have been quite a sight!

FRANCES CATTANACH is Director of North Wales Wildlife Trust

Hysbysfwrdd / Noticeboard

If you would like your wildlife event to feature on these pages please contact us on 01248 387373 or email info@naturcymru.org.uk (entries may be edited). Please mention Natur Cymru if you attend any of these events.

National Botanic Gardens

EVENTS

1 Jul Alfred Russel Wallace 150 year celebration. On 1st July 1858 Alfred Russel Wallace, a Welshman, and Charles Darwin presented a paper to the Linnaen Society, proposing the theory of natural selection for the first time. NBG celebrates with an exhibition and readings.

23-25 Aug *Bank Holiday weekend - Family events*

6-7 Sept *Orchid Festival*

13-14 Sept *The Big Village Show.* Hugely popular celebration of rural produce and crafts.

Plas Tan y Bwlch

COURSES 2008

30 Jun-4 Jul *Woodland Conservation Management*

14-16 Jul *NVC & Management Planning for Site Management*

21-25 Jul *Plant ID for Surveying, Evaluating and Monitoring Conservation Sites*

2-5 Sept *Planning and Design of Interpretive Media*

8-12 Sept *Advanced Monitoring for Site Management*

9-12 Sept *Surveying Methods, Habitat Conservation and Legal Protection for Bats*

14-16 Oct *The Biodiversity Duty - Focus on Local Action*

Details: www.plastanybwlch.com or phone **01766 590324**

RSPB

EVENTS

The RSPB have far too many events in Wales for us to list here! To find out what's happening near you visit **www.rspb.org.uk/events** or **www.rspb.org.uk/wales** or phone **029 2035 3000**.

Fenn's, Whixhall & Bettisfield Mosses NNR

EVENTS

27 July *Creatures of the Sculpture Plaques walk* 1-4pm. Celebrate International Bog Day with a guided tour (3.5km) trying to spot some of the bog creatures highlighted on the wood-carvings along the Mosses Trails.

13 Aug *Bog Creatures biodiversity workshop for children* 10am-4pm. A hands-on opportunity for children to learn about the boggy wildlife of the Mosses.

31 Aug *Woodcarving Prehistoric Pines on the Mosses day* 11am-3:30pm. Woodcarving workshop to include a walk on the Mosses to hunt for the ancient pine.

21 Sept *A Peat-cutter's Life* 1pm. A stroll with Bill Allmark, a former peat cutter, to learn how life on the Mosses used to be and why the cutting had to stop!

Full details: Caroline Evans (weekdays) **01743 282000** or Joan Daniels (weekends) **07974 784 799**, or **caroline.evans@naturalengland.org.uk**

Newport Wetlands

EVENTS

13 Jul *Open Day* 11-4pm. Stalls, displays, guided walks (3-4km), refreshments and children's activities.

6 Aug *Damsels and dragons* 10-12am Kevin Dupé leads a walk (3-4km) to see these fascinating insects that have been around since before the dinosaurs. No dogs except guide dogs. Send a blank email to **tellmemore@NewportWetlands.com** to receive the latest news, or phone **01633 636363**.

Centre for Alternative Technology

COURSES

19 Jul Mammals of the Old Quarry

16 Aug Mini Beasts of the Old Quarry

30 Aug Charcoal Making: Practical and Theoretical

27 Sept Trees of the Old Quarry

Please book early, **01654 705981**, **courses@cat.org.uk**, or see website.

Flora Locale

WILD PLANTS FOR LANDSCAPE AND BIODIVERSITY

This year's events are suitable for a wide range of people involved in designing, managing and restoring wild plants for landscape and biodiversity. Most involve seeing projects 'in the flesh' – the best way to learn about what works, & what can go wrong. See the training & events section at www.floralocale.org. or call **01488 680457**.

Wales Biodiversity Partnership

EVENTS

Many partners in the WBP run events - some are listed here. For full listings visit the events calendar at **http://www.biodiversitywales.org.uk/English/Events/** **http://bioamrywiaethcymru.org.uk/cymraeg/Events/**

15 Aug 16.30, 11 Sept 14.45 *Evening Wildlife Cruises*, 4 hours, £25, looking for marine mammals. Gower Marine Mammals Project. To book contact GMMP **01639 710239** **gmmp@ecosurveys.uk.com**

21 Aug *Evening 'Porpoise Picnic'*, Strumble Head look-out near Fishguard, 6-8pm. Contact **info@seatrust.org.uk** **01348 404407**

Shared Earth Trust

COURSES 2008

27-29 Jun *Higher Plant Identification* – an introduction (LLL) £60

3-4 Jul (Part 1) & **24-25 Jul** (Part 2) *Diversity of Invertebrates of West Wales* (LLL) £60

9 Jul *Pond Creation and Management* £100/£50

15-16 Jul (Part 1) & **12-13 Aug** (Part 2) *Butterfly Survey* (LLL) £60

23-24 Sept *Phase 1 Habitat Survey* £150/£100

Contact **01570 493 358** **www.shared-earth-trust.org.uk** or (LLL only) **learning@aber.ac.uk** **01970 621580**

Diolch am y lluniau i / For illustrations, thanks to:
Mandy Marsh, Natural England, Alastair Robertson, Peter Winstanley

Back issues of *Natur Cymru* (Nos 2 - 26) are available priced £3.00

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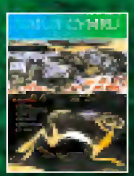
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Water lillies and *chara* beds at Bosherston Lakes

Bob Haycock

Bird's-foot trefoil

James Robertson

NATUR CYMRU SUMMER/HAF 2008

www.naturcymru.org.uk
www.natureofwales.org.uk

£4.00